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AUTHOR Borman, Kathryn M.
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ABSTRACT

Three related studies reflecting three perspectives on children's interpersonal relationships, playground games, and social cognitive skills are reported. Subjects for each of the studies were children enrolled in third and sixth grades at three elementary schools in Cincinnati during the 1979-1980 school year. The first study documents the ecology of children's free play behavior during lunch recess. Particular attention is given to the physical setting in terms of equipment, time available for play, and supervision provided, as well as children's reports of play activities and the structural properties of play. The thrust of study two is to explore relationships between and among social cognitive skills, intellectual functioning, age, sex, socioeconomic status, and several social/behavioral measures (such as friendship ratings, popularity, and game-playing status). The second study aims to provide a developmental-psychological and longitudinal perspective on internalized sets of abilities, skills, and characteristics seen as important elements of children's negotiation of play. Study three describes children's behavior during recess for lunch; results reported in this study are based on the analysis of transcriptions of audiotaped field notes recording children's spontaneous playground behavior. Differing theoretical frameworks relevant to the three studies are discussed in the literature review sections of each of the three investigations. (Author/RH)

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Children's Interpersonal Relationships
Playground Games and Social
Cognitive Skills

Kathryn M. Borman
University of Cincinnati

FINAL REPORT

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for the Project NIE G 79-0123

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GENERAL INTRODUCTION

Organization of the Report:

This report is organized as three studies. Study One provides documentation of the ecology of children's activity during lunch recess.

Study Two reports the results of a longitudinal analysis of several factors: children's cognitive skills, children's level of intellectual functioning, children's game playing status, and children's popularity as work and play partners. Also, considered in Study Two are three factors measured at a single point in the research: children's physical skills, teacher ratings of children's social cognitive and academic skills and full class roster peer ratings.

Study Three reports the course of children's actual behavior during the course of a lunch recess activity. Of specific interest here are the following:

- (1) The game(s), if any, played by children,
- (2) length of time spent by children in organizing and playing games,
- (3) time spent in non-game activity preceding the game, and
- (4) nature of distractions (i.e., outside interference, etc.), if any, occurring during the course of play,
- (5) nature of game maintenance strategies used by children to insure the continuity of action in the game.

Rationale for Organization of the Final Report:

Methodological as well as substantive variations characterize the research reported here and lead to its organization in three major sections. Results reported in Study One are derived from children's self reports of playground activity during an approximately three-week long period. Results reported in Study Two comprise analysis of data gathered from children's performance on a set of standard social cognitive tasks. A measure of intellectual functioning, a measure of physical skill and measures of sociometric choice. Results reported in Study Three are derived from analysis of transcriptions of audio taped field notes. Audio tapes and notes represent records of children's freely initiated, spontaneous playground activity during lunch time recess.

The three studies as a whole constituted three perspectives on children's interpersonal relationships, playground games and social cognitive skills. Because data reported in each study are derived from observations, interviews and testing of subsets

of the same population of children in two grade levels at three schools the results reported form a coherent picture of several dimensions of the variables of interest, focused as they are upon children's relationships in the context of free play. However, differing theoretical framework mark Studies One, Two and Three. These theoretical frameworks presented in the discussions of literature review sections early on in each of the three studies.

**Study One: The Ecology
of Children's Play**

**Kathryn M. Borman, Shirley Piazza,
David E. Barrett and Padmini Sheoran
University of Cincinnati**

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for the Project NIE G-79-0123**

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Purpose:

Study One is a descriptive account of the ecology of children's activity during lunch recess. Its purposes are as follows:

1. To provide an account of the physical setting of the three playgrounds including equipment available for use at each locale, amount of time available for play and type of supervision on each playground.
2. To describe the nature of lunch time recess activity as reported by children in each of the school settings. Specifically, to document the activities reported by children who vary by race, age, sex and status as game experts, samplers, and shunners.
3. To examine the structural properties of play. Here the concern is to document the array of cognitive, physical and social demands made of players in the context of play at specific games frequently reported across all three school playgrounds.

Taken together, the thrust of the three general purposes is to capture the ecology of children's freely organized activity during lunch time recess by documenting the various structural components of that activity.

Rationale:

Following from the set of purposes outlined above, three structural components of children's play environments are especially salient. These elements are the physical setting, the school setting and the complexity of the learning experience.

The Physical Setting;

The physical setting is important since it delimits the activity children can initiate, and maintain (Barker and Wright, 1955). Here the physical setting is seen specifically as the school playground and the surrounding school yard, if any, including open fields, treelined areas and the like. Schools vary in terms of the resources they are able to command (Ogbu, 1974; Peshkin, 1978). However, there is reason to believe that elementary schools within the same public school system would be likely to have access to similar allotments for physical space and equipment. Dimensions of physical space and the availability of equipment are important mediating variables which inevitably channel and shape behavior. Realms of socializing experience are either available or not depending upon material circumstances accessible to children.

The School Settings:

The three school settings can be differentiated along several dimensions. Likewise, there are important similarities among the schools allowing for comparisons. The most fundamental likeness is the organizational structure. Characteristic of each school is the elementary K-6 age-graded arrangement. Also, each school is a racially desegregated setting.

Two of the three, both of them schools in the same large city public school system, sponsor alternative programs to encourage desegregation in upper grades (4-6) and to allow open enrollment and sibling transfer at all grade levels. However, there are important programmatic differences between the two schools. The curriculum at Oyler School in the upper grades is an applied arts curriculum emphasizing vocational training in the areas of materials construction and related fields. The curriculum in place as the alternative program at Covedale emphasizes preparatory course. These programmatic dimensions are especially important in a city that bases admission to its sole elite college preparatory secondary schools upon performance on achievement tests (The Stanford Achievement Test series, typically) given during the sixth grade year.

By contrast, Hoop School in the suburban community of Mt. Healthy has accomplished desegregation through voluntary redistricting within the system. Mt. Healthy Public Schools implemented a redistricting plan in the 1976-77 school year. A second redistricting occurred in 1979. A law suit brought against area schools by the NAACP explicitly excluded the Mt. Healthy system, citing the city's efforts in achieving desegregation. Mt. Healthy Schools remain the only area school district so excluded in the NAACP suit.

Thus, although each school is organized at least in the primary grades around a traditional age-graded curriculum and although each is a racially desegregated setting, there are important differences. First, schools included in the study are stratified according to the percentage of minority students in the school, a factor associated with social and achievement outcomes (Blyth, Simmons and Bush, 1978). Also, programmatic variations highlight differentially anticipated occupational outcomes for children attending two same city system schools. Table 1-1 outlines the changes over time in racial group composition of the three elementary schools of interest. The 1974-75 school year, the first for which data are reported, marks the initial system-wide desegregation plan for Cincinnati Public Schools although Oyler and Covedale Schools did not implement current instructional arrangements until 1979-80 and 1978-79, respectively.

Other dimensions of school setting directly related to this study include specific numbers of children within grades three and six, the grade levels of interest in Studies One, Two and Three. Table 1-2 characterizes the three schools by racial group composition and by sex within each of the two grade levels.

Percentages of black minority students vary across the two grades within each school from less than five percent at one school (n=6) to approximately 23% at another (n=18), with the third school's black population at grades three and six comprising approximately 44% (n=48) of the total. Numbers of males and females are roughly equal within each school, with the greatest disparity at Oyler where boys form a notably larger proportion of the student group. Other school setting features of importance include characteristics of student achievement and mobility, characteristics of classroom teacher experience including number of years of inservice teaching, educational attainment and the like and characteristics of family income and occupation. These are displayed in Tables 1-3, 1-4, and 1-5.

It is clear from these data that Oyler School, dominated by an identifiable minority group -- urban Appalachian whites (Wagner, 1976; Borman, Lippincott and Matey, 1978; deStefano, 1980) is least economically advantaged. Levels of family income as represented by the percentages of families at or below the poverty level in addition to unfavorable characteristics of student achievement and mobility portray this group in terms associated with other, subordinate minorities (Ogbu, 1974). According to Ogbu, groups including American Indians and blacks have more or less against their will been absorbed by the larger society and sense that their incorporation has "been accomplished through treachery and injustice on the part of the dominant whites" (Ogbu, 1974:3). The history of urban migration and settlement in northern cities by families from the 396 counties of the Appalachian region is comparable in its legacy of cultural invasion and human exploitation to that of blacks and other migrant groups during this same period (Arnow, 1972; Coles, 1971; Schwartzweller, Mangallem and Brown, 1971).

Complexity of the Learning Experience:

Finally, the complexity of the learning experience in play is conceptualized as a set of factors most directly related to children's social learning. In fact, dimensions of play originate with children who must actively organize and orchestrate the structures of play. It is important to emphasize the theoretical position assumed by this statement. The assumption in research investigating socialization in peer groups has long held a "top down" view of the process whereby the young learn the knowledge, skills and values held to be important by the social group. There are recent, notable exceptions, especially among sociologists who have an interest in the rehearsal and acquisition by young children of social roles in preparation for adult status in the society (Denzin, 1977; Corsaro, 1979). However, there has been little effort to understand "social learning mechanisms that originate with the child, rather than with the adult socializers." (Farnham-Diggory, 1979).

Thus, in investigating the contingent structures of children's spontaneous activity, a set of three assumptions is made:

1. Children construct activities appropriate to their specific capacities,

2. Capacities may vary dependent upon age, gender and ethnic or racial group,
3. Capacities are channeled in important ways by the physical setting and by school setting as dimensionalized in this study.

Two related approaches guide the conceptualization of structural properties of children's spontaneously organized play and games. First, the perspective of Janet S. Lever emphasizes the gener-related characteristics of games and activities frequently reported by fifth grade children whose diary data Lever used in her analysis (Lever, 1976; 1978). Lever's typology includes the following dimensions: 1) number of participants, 2) role(s) of participants in play, 3) interdependence of player rules, 4) rules of play, 5) team formation rules and 6) status of the activity in question as a game or as play.

Lever's general findings reveal the greater likelihood of boys than girls to engage in game play, specifically in games requiring team organization. Moreover, when girls do participate in games they engage in play at hopscotch and in other games requiring relatively modest levels of skill and ability in comparison with skill requirements inherent in male preferences. Finally, boys' games demand strategic skills while the use of strategy in game play by girls is infrequent.

The second perspective derived from Elliott M. Avedon (1971) includes structural components as well as cognitive and other individual skills and abilities required by play. Avedon's model is more inclusive to differing cultural contexts of play or games. Specifically, Avedon's typology includes dimensions of cognitive skill seen as inclusive of both an informational context in which participants utilize figural, symbolic, semantic or behavioral cues and a set of process components including cognition memory, divergent/convergent production and evaluation. Another domain of individual ability is sensory motor skills. Here, Avedon does not specify a subset of abilities. Following Bruininks' analysis of physical skill (1978), a subset of abilities is put in place to fill out this domain. Bruininks' battery of sensory motor skills includes running speed and agility, balance, bilateral coordination, strength, upper limb coordination, response speed, visual/motor control and upper limb speed and dexterity. Finally, Avedon's model specifies criteria descriptive of the physical setting and interaction patterns characteristic of game or play activities. As can be concluded from the review of factors outlined in this typology, Avedon has taken the anthropologist's large view in deriving a most complex model to describe several domains, internal and external to the individual, and importantly affecting the person at play. Unlike Lever's model, which was produced from a factor analysis performed upon a relatively parsimonious array of variables pertaining only to the structure of play and games, Avedon's model has not been empirically tested, and rather, derives from an anthropological interest in all manner of features surrounding human behavior.

TABLE 1-1

Percentage Black Minority Students
1974-1980

School Year	<u>OYLER</u>			<u>COVEDALE</u>			<u>HOOP</u>		
	Black	White*	% Black students	Black	White	% Black students	Black	White	% Black students
1974-1975	0	752	.0%	0	604	0%	N/A	N/A	487**
1975-1976	2	682	.3%	38	567	6.3%	N/A	N/A	494**
1976-1977	4	630	.6%	67	502	11.8%	106	426	24.9%
1977-1978	3	558	.5%	56	467	10.7%	123	350	35.1%
1978-1979	1	567	.2%	87	437	16.6%	93	329	28.3%
1979-1980	19	456	4.0%	169	420	28.7%	65	300	17.4%***

* May be considered urban Appalachian

** Total student enrollment

*** 2.1% or 8 students have other minority group status.

TABLE 1-2

POPULATION BREAKDOWN
BY
SCHOOL, GRADE, RACE, AND SEX

School	Grade	Sex	Black	White	Appalachian	line (total)	Total Third	Total Sixth	Total School Male	Total School Female	TOTAL SCHOOL
	3	F	3	22	0	(25)					
	3	M	4	17	0	(21)					
	6	F	4	15	0	(19)					
	6	M	7	24	0	(31)					
			(18)	(78)	(0)		46	50	52	44	96
	3	F	0	0	30	(30)					
	3	M	1	0	42	(43)					
	6	F	0	0	27	(27)					
	6	M	5	0	35	(40)					
			(6)	(0)	(134)		73	67	83	57	140
	3	F	12	24	1	(37)					
	3	M	9	27	3	(39)					
	6	F	18	28	1	(47)					
	6	M	9	33	0	(42)					
			(48)	(112)	(5)		76	89	81	84	165
TOTAL			72	190	139		195	206	216	185	401

TABLE 1-3
Student Characteristics

	Oyler	Covedale	Cincinnati Elementary Schools
Total Enrollment			
Average Daily Attendance			
% Black Minority			
Reading Achievement Scores (Metropolitan Reading Test)			
Grade 1	90% at or below Stanine value of 5.6	90% at or below Stanine value of 8.2	90% at or below Stanine value of 7.8
Grade 4	90% at or below Stanine value of 4.6	90% at or below Stanine value of 7.7	90% at or below Stanine value of 6.8

	Hoop	Mt. Healthy Elementary Schools
Total Enrollment	473	3,416
Average Daily Attendance	96.2%	N.A.
% Black Minority	26%	29%
Reading Achievement Scores (Stanford Reading Achievement)		
	Grade 2 - Mean grade equivalency 3.7	Grade 2 - Mean grade equivalency 3.6
	Grade 4 - Mean grade equivalency 5.8	Grade 4 - Mean grade equivalency 5.2

*Grade 1 was not tested in 1977-78.

TABLE 1-4
Staff Characteristics

	Oyler	Covedale	All Cincinnati Elementary Schools	Hoop	All Mt. Healthy Elementary Schools
Average Years Teaching	8 (at Oyler)	11 (at Covedale)	12	6.3	9.0
Education (% M.A.)	47%	47%	46%	n.a.	n.a.
% Women	79%	77%	84%	86%	89%
% Black Minority	21%	32%	32%	8%	6%

TABLE 1-5

School Community Characteristics

	Oyler	Covedale	All Cincinnati Elementary Schools	Hoop	All Mt. Healthy Elementary Schools
*Average Family Income	\$6,000	\$14,800	\$10,871	n.a.	\$12,000
*Families at or Below Poverty Level (\$3,800)	29%	2%	12%	n.a.	3%

*1970 Census Data

RESEARCH METHODS

Subjects

Children:

Subjects of study included all children enrolled in third and sixth grades at Oyler, Hoop and Covedale Elementary Schools during the school year 1979-1980. A total of 401 children provided usable sets of self report data on playground logs, daily records of their lunch time recess activity over a three week period in Fall, 1979. Children who are subjects of study hold status as one of the following:

- (1) Game experts, those reporting play in a single game on at least 70% of their playground logs;
- (2) Game samplers, those reporting play in a variety of games or other activities and no single game as often as 60% of the time; and
- (3) Game shunners, those reporting spending at least 70% of their recorded playground episodes observing others, hanging around talking to friends and the like.

Schools:

The three elementary school settings themselves served as objects of study as the ecological domains for lunch time recess activity. To document features of the setting, methods from visual anthropology were employed (Collier, 1967). Photography has an acknowledged practical place in fieldwork, especially in early phases of research. According to Collier, photography can provide the researcher a wide view within which cultural detail can find an organic place. Visual documentation enables the researcher to grasp the ecology and cultural geography of the setting.

Photography was used in two ways as a tool to portray details of selected aspects of the domains of play. Of less immediate relevance to Study One was the use of photography to gain identification of the 401 children of interest all of whom were photographed on the playground and identified during the first weeks of the research. This procedure was useful overall in providing a check on children's race and gender. Of more related concern here, photographs were used to document the playground features considered important in shaping children's behavior.

Games and Activities:

In order to round out the picture of the ecology of play in each of the three school settings, 28 activities including rule-governed, organized activity in games, were objects of analysis. Activities selected for analysis were those named by children in their playground logs as either of the following:

- (1) forced choice responses (n=13) or
- (2) spontaneously named activities (n=7).

Several in this latter category were activities such as walking, working in the cafeteria and jogging that were likely to be undertaken by the child alone. Thus, a set of four activities (academic work, i.e., classwork; school-work such as crossing guard duty or lunch room work; jogging and walking) were assigned an alternate coding to provide a designation for solitary pursuit of the activity in question.

A subset of activities, fourteen of them games, were selected for a set of cluster analyses as described below. Chosen for inclusion were pastimes considered leisure activities as opposed to school-related tasks. In this subset were the following: hopscotch, tag, four-square, baseball, football, basketball, bars, chasers, giant four-square, kickball, football, soccer, racquetball/tennis, volleyball, imaginative play, walk/talk, jogging/running and jumprope.

Procedures and Task Materials:

In Study One, a single document, the playground log, provided the bulk of descriptive information sought to document playground life. Still photographs were the other source of information.

Playground Logs:

Administration of playground logs occurred at the outset of the study. Two sets of items, one a forced choice array using pictorial displays and the other structured as a questionnaire, were combined in the design of the playground log (see Appendix I). Teachers modified these instruments to insure age-appropriate style and format. Specifically, teachers at each of the three schools designed maps of the playground and school yard. In addition, logs were modified to include space for recording the names of children's partners in play.

Logs were kept daily by all third and sixth graders at each school over a three week period to provide specific information about the general characteristics of games or other playground activities in which the child was engaged on a given day. The information obtained from logs includes the number and names of games played, the location of the activity on the playground and number, sex and identity of peers with whom the child interacted while engaged in play or in other activities. These data are records of which games are played, by whom, where and how frequently for each game or activity at each school. These data (1) provide a description of the ecology of each child's play over a period of time, (2) give evidence of the activity by grade and by school which is characteristic of a particular school's playground life, and (3) allow identification of a subset of children who are game "experts", "game samplers", and game "shunners." Boys and girls randomly selected from these last named categories constitute the sample individually tested and interviewed according to procedures described in Study Two.

Photographs:

Photographs were taken using 35 mm Kodachrome color slide film and a Nikkomat FTN fitted with 50 mm and 28 mm lenses. The objective in photographing play environments at each school was to capture both near detail and panoramic dimensions of salient features. Specifically, dimensions of playground space, permanent equipment such as bars and basketball poles, as well as marked areas for games such as four-square and hopscotch were photographed. Each playground was photographed at the same point in the research study (Spring) by the same two individuals (Piazza and Barrett).

Data Analysis Procedures:

In accordance with the three stated purposes of this study, three sets of analyses were used to provide a descriptive account of the ecology of children's lunch time recess activity. The first set of procedures is the comparative analysis of photographs of school playgrounds and yards. While not providing an exhaustive analysis of each ecological detail, the procedure does allow comparisons of the condition of available equipment at each of the three schools. This procedure serves also to orient subsequent analyses and interpretations of data reported in all three studies.

The second and third sets of analyses were based upon playground log self report data. In order to define the activity context of children's lunch time recess in a straightforward fashion, computations of children's reported play and games were made. Here the question is simply what is it that children are doing during the course of their free time at recess? To expand this question to provide a more detailed account of children's experiences in specific pastimes, a cluster analysis procedure was used to map the domains of structural and cognitive properties, sensory motor skills and interaction patterns characteristic of specific activities

Developed by researchers in the fields of geography and biology and used to organize sets of objects across a number of variables, cluster analysis has also attracted the attention of researchers in the social and behavioral sciences (Bailey, 1974). Construction of a similarity matrix, or as in the case of data reported here, of a set of matrices is an appropriate procedure for use in exploring theoretical issues. In the case of these data, cluster analysis procedures are useful for data description since they provide a way of defining patterns of the properties of playground games and activities which in turn serve as contexts for children's informal learning of sex-role appropriate behavior, gamesmanship and a host of social cognitive skills. Using a clustering technique allows the researcher to apply a theoretically derived array of descriptive variables to real world phenomena in order to generate a typology of those phenomena.

The clustering technique used here is the average linkage method, a method which presumes a strongly positive correlation between one game or activity and any other game or activity forming the cluster. This procedure is concerned with constructing a cluster containing objects or variables as similar as possible along N dimensions. The usual measure of likeness or association is the correlation coefficient. The smaller the coefficient, the smaller the degree of association or similarity.

A set of questions follow from the procedures just described:

- 1) Are there qualitatively different conditions in the ecology of children's playground lives as determined by the material circumstances of children's surroundings?

- 2) Are different games and activities characteristic of particular groups of children? Specifically, are school, sex, age and racial or ethnic differences apparent in reported activities and in reported number and sex of players?
- 3) Do certain games and activities provide at least potentially more complex and hence richer contexts for children's informal learning? What is the nature of a hierarchical ordering of games and pastimes varying in structural and cognitive properties, sensory motor skills and interaction patterns? Finally, are games of more or less complexity along these dimensions favored by children who differ by school, sex, age and race of ethnicity?

RESULTS

Playground Ecology

Material Conditions:

Photographic evidence of playground conditions graphically portrays the varying material contexts which characterize the three schools. Covedale and Hoop Schools, like Oyler, have expanses of asphalted grounds marked with figures for hopscotch, four-square, tetherball, basketball, and baseball. Running lanes for track events are also painted on blacktopped surfaces at each school. However, there is considerable variation in the condition of playground surfaces. At Oyler, broken glass litters much of the playground, particularly the area adjacent to the school building. Hoop's playground, recently resurfaced and painted (Summer, 1979) are the best maintained grounds. Painted lines are clear; game areas are well-marked and spatially differentiated, allowing traffic to flow around the edges of ongoing games such as racquetball, kickball, basketball, hopscotch and tetherball.

Perhaps the most dramatic feature at both Covedale and Hoop is an expanse of grassy field and, in the case of Covedale, a lightly wooded area contiguous to the asphalted playyard. Bars and jungle gyms are situated among two groves of oak trees at Covedale. At both Covedale and Hoop the grassy area is frequently used for kickball games. By contrast, there is no grassy area at Oyler. Indeed, the only notable vegetation was a hawthorne tree with needle-sharp spines protruding from its branches which neighborhood parents indignantly viewed as a manifestation of the city's systematic attempt to affront them and injure their children. The tree subsequently was removed by the city recreation board midway through the school year.

Supervision:

At each of the three schools, one or two classroom teachers were routinely assigned to "playground duty" during the

recess period. Supervision at each school was cursory, playful or militaristic dependent upon the personnel assigned to monitor children's activity on a given day. Interactions between supervisors and children were common at all three schools and were generally of a positive sort. Children at each school were observed to seek out a teacher either to settle a grievance arising from play in the game at hand or to consult about school work or minor playground disputes. Teachers rarely interfered in ongoing game activity; their function centered on soothing bruised shins or egos and providing a haven of security and comfort. Only at Hoop School were teachers organizers of games and play activity and this only rarely.

Oyler and Covedale Schools were unique along notable dimensions of supervision. Early in the school year at Covedale, children at all grade levels complained of fighting and disruptive behavior on the playground. Equipment allocation was also an issue, with children frequently taking embattled positions in a struggle over use of a soccer ball or other pieces of school property distributed during the recess period. Under the leadership of one of the third grade teachers, a plan was formulated for allocation and distribution of equipment, all of it balls of various kinds. Balls subsequently were marked with a designated grade and sex, and distribution was monitored by an older child stationed near the equipment bin throughout the recess period. Early in the school year at Oyler, neighborhood parents were angered by what they regarded as rough treatment given younger children by older children at recess. Working informally with the school administration and with some primary grade teachers, two or three mothers voluntarily served as playground monitors during the recess periods children in grades K-3 were on the playground.

Certainly the most striking supervisory arrangement at any school was the voluntary stint performed daily at Oyler by a neighborhood parent, the elderly aunt and guardian of a fifth grade boy. Each day as older children burst on the playground, she took her station in the area where kickball play was frequent and dispensed equipment brought from home for the children's use. She actively served as referee for the kickball games which were enormously popular with older children at this playground.

Time Allocation:

The two same city system schools, Oyler and Covedale, had similar periods for lunch and recess activity allotted to the daily school schedule. Lunch periods were 45 minutes in length at each school. Children at Hoop had a longer period (60 minutes) for the same purposes. At all three schools, children typically finished lunch quickly, consuming either a hot meal available through the school cafeteria or a sack lunch brought from home. Usually in less than fifteen minutes and most often in less than ten minutes after the period began, children were streaming from the lunch room onto the playground. The flow of children was monitored at

only one school, Hoop, where passage to the playground was sanctioned by a teacher only after a child was observed to have dumped his/her tray and refuse.

The length of time actually available for playground activity varied for each child from approximately five minutes to 30 minutes or more.

Playground Life:

Data reported here are derived from children's self reports of their playground activity. Data are organized in two ways. First, data are grouped to summarize percentages of children who reported playing specific games or following other pursuits of their daily accounts of recess activity during a three week period.

Second, data are organized on the basis of individual children's modal activity as the activity context with reference to the number and sex of other reported participants at play within the modal activity context. Playground logs numbered more than 4,000, and the amount of information provided was staggering. It was simply not possible to process detailed information on play participants for all playground activities named by an individual child. Thus, although each activity reported by all children keeping logs during the fall was taken into account, specific information on participants at play is limited to calculations of number and sex of co-participants with reference to a given child's modal activity only. Furthermore, in order to insure stability of results, type of modal activity and related contextual information (i.e., number of participants, etc.) were calculated only in cases in which a child had completed 10 or more logs.

One last note on data organization seems useful. In the case of both summary data and modal activity data, results are reported with reference to the major independent variables of interest in all three studies: grade, age, school, sex and status of the child as expert, sampler or shunner.

Summary Data:

Developmental trends are apparent in games and activities reported by third and sixth graders. First, the profile of games and activities pursued by third graders in Table 1-6 is jagged, with sharp peaks and deep valleys over the range of 28 activities monitored by children at both grade levels. In contrast, the activity profile of sixth graders presented in Table 1-7 is relatively flat. Although there clearly are pastimes that are generally preferred and those that are typically avoided, there is not the wide range in the size of percentages of children reporting particular pursuits as is the case for third graders.

Specifically, among the 28 games and activities, no third grader reported participating in three: racquetball/tennis; volleyball; and jogging-solitary; only one child reported playing giant four-square and only two children reported playing basketball. At the other extreme, chase (48.71%), kickball (38.9%); watched others (45.71%), and watched others-solitary (39.9%) were extremely popular activities, chosen by large percentages of third graders. In contrast all 28 activities were mentioned in playground logs kept by sixth graders, although some were less attractive than others. For example, fewer than 15 individuals mentioned play on bars, giant four-square, baseball, jogging-solitary or with others, walking and/or talking, racquetball/tennis and soccer.

A second developmental trend is portrayed in the decline in popularity of games such as hopscotch, tag and chase. This decline seems attributable to developmental trends in game preference (Borman and Lippincott, in press). These games have fewer complex rules and are not formally organized team sports as are football and basketball both of which are more frequently reported by older children. Consistencies across the age groups are apparent in activities such as kickball and various games involving use of a ball which, though game-like in that they are rule-governed activities, allow for differentiated roles among players, and so forth, are in real-life played on an ad hoc basis with little regard given to maintaining regularities in team size and the like. Kickball provides the best example of what might be termed a "middle-range" game, ranking somewhere between tag and basketball with respect to the rigor applied by children on the playground to maintaining a team size consistent with the rule book. Although newcomers were carefully divided equally between the two teams at play once a kickball game was underway, as many as 25 players or more were often absorbed into teams whose ideal number by the book is nine.

The importance of informal learning as a feature of playground life for both third and sixth graders is apparent in the consistency with which children at both grade levels report watching others at play. However, walking and talking, also a passive pursuit, takes on importance for older but not for younger children.

The data just reported have indicated developmental trends in play picturing sixth graders as more likely to engage in what Lever (1976) has described as more complex games. It is important to stress that these data represent play in team games such as football by substantial numbers of sixth grade children and not by a handful who played football consistently. Thirty-two percent of all sixth graders reported playing football at least one time. By the same token, substantial percentages of all third graders reported engagement in characteristically third grade-like events. Roughly 47% reported one or more chase sequences in their playground logs. The large percentage of sixth graders reporting football represented almost all boys at that grade level, but less than one percent of the girls. To gain more comprehensive understanding of these developmental trends, gender, and racial or ethnic differences and school differences

must be examined.

Gender:

Although there are sex differences in play, differences are predicated upon age differences such that, as an example, although hopscotch is reported by a larger percentage of third grade than sixth grade girls, in both grades hopscotch is reported by far more girls than boys.

To look at sex differences in play preferences, more specifically, among third graders, greater percentages of girls than boys reported instances of walk and/or talking (26.2%); tetherball (16.4%) and imaginative play (14.2%). Mention was made of these activities by less than 4% of third grade boys. Similarly, larger percentages of third grade boys reported play at soccer (28.2%) and football (9.7%) in contrast to percentages of girls reporting these same activities, less than 5% in all. In general, games and activities reported by larger numbers of either sex reflected the standard sex role stereotypes for play: girls assume passive roles in play while boys take more active roles in strategic interaction in the context of team games. However, there are notable exceptions. Third grade girls and boys in substantial numbers reported playing chase one time or more, although for third grade girls hopscotch was the clear favorite of the majority. Fifty-three percent of all third grade girls reported one or more hopscotch games. Among third grade boys kickball was selected by the greatest percentage (45.6%).

Among sixth grade girls, although a greater percentage reported watching a movie or watching others, this percentage is inflated by the numbers of children who viewed films during three recess periods in the school auditorium at Covedale School as the mandatory rainy day activity. In contrast to their younger sisters, sixth grade girls generally take more active roles in game play activity. Chosen at one time or another by more than twenty percent of sixth grade girls were the following: tetherball (33.3%); four-square (29.9%); chase (26.9%), walking and/or talking during the recess period (24.7%); volleyball (21.5%) and kickball (21.5%). Only walking does not involve a high degree of activity in an organized game.

Among sixth grade boys, large percentages spread themselves across a number of characteristically masculine pastimes. Upwards of 50% reported playing football; almost 60% reported kickball. Other ball games in addition to basketball were reported by substantial percentages of boys. Fairly large percentages of sixth grade boys and girls reported the same activity, presumably a pastime in which boys and girls were both present and interacting. Kickball, watching others or attending a movie, and walking and/or talking during recess were named by relatively large numbers of both boys and girls.

School, Race and Ethnicity:

Developmental trends in play reported earlier and gender differences in play just described are fully understood only in the context of the school. School, it should be repeated, is a multidimensional variable that incorporated student and staff characteristics; playground equipment, physical setting and so on as descriptors. All these factors should be kept in mind in connection with the discussion here of school and race or ethnicity.

Two schools, Covedale and Hoop, as has been noted, have substantial percentages of black minority children enrolled in comparison with Oyler School which until the 1979-80 school year had less than one percent black minority children enrolled. The numbers of minority children are still small (only 4%). Despite the city system's efforts to increase minority enrollment through institution of an alternative open enrollment program in the applied arts, the school remains dominated by a substantial urban Appalachian majority who are residents of the immediate school neighborhood, Lower Price Hill. Enrollment of black minority children at Covedale School increased dramatically between the 1978-79 and 1979-80 school years, almost doubling from 16.5% to 28.7% of all students enrolled. The opposite trend is clear at Hoop where re-districting trimmed percentages of minority students from 28.3% to 17.4% for the comparable period.

Profiles of playground activities for black children enrolled at Covedale and Hoop Schools are rather different, especially when the profiles of play of the majority group in each school are taken into account. At Covedale, although a large majority of black children reported play at tetherball (i.e., 58.3% of the 48 black children in grades 3 and 6), 37.5% indicated watching others or watching a movie while along at some time during the three week playground log period. Only five children altogether at Hoop were solitary watchers and none were minority group children.

In fact, for the most part at Hoop, patterns of play for both racial groups were very similar with kickball as the activity reported by the greatest number of children in each group. Tetherball which predominated as a game mentioned by a large proportion (58.3%) of black children at Covedale was the choice of 22.2% of Hoop black children and 26.9% of Hoop whites. Likewise the game of chase was selected by comparable percentages from each racial group, 22.2% and 23%, respectively.

A major difference between whites and blacks at Hoop was the more varied program of play for white children. Black children reported non-participation in a larger number (12) of activities than white children who reported participation in all but two activities.

At Oyler, the game of chase was reported by over half (61.2%) of the 139 urban Appalachian children who constituted the dominant ethnic group in this school. The other activity (other ball) reported by a majority comprises a set of informal, ad hoc

games or game-like activities in which a ball is featured as the piece of equipment. For example, a pastime reported as "ledge ball," loosely structured to resemble the game of baseball, was played by two or more players who alternated turns "at bat." "Batters", standing in an alcove of the building, flung the ball upwards to hit one wall at an angle so that it bounced against an opposite wall in such a way to elude the defense who waited with outstretched arms to catch the ball before it hit the ground, signaling an out. Tosses hitting the highest points on the walls were judged as homeruns.

Although equipment was scarce, Appalachian children did report playing at all but five activities, a larger number than that reported by black children at Covedale. Like blacks at Covedale, a large percentage (35.3%) of Oyler children reported passive involvement as watchers. However, Oyler children were watchers in the context of other children, while Covedale children tended to watch others or attend a movie by themselves.

Modal Activity Data:

The information children provided about their involvement in their most frequently reported activity on the playground provides a basis for interpreting the nature of playground life with some specificity. Data reported below are derived from the logs of all children (N=298) who provided 10 or more fully completed logs during the three week period.

Since the nature of the reported activities themselves has already been discussed in some detail, the report of results here, will center upon the reported number of boys and girls named as participants in play within specific play contexts. The tendency for children of either gender to expand the number of same gender co-participants and, correspondingly, to deflate the number of opposite sex co-participants is a general trend. Presumably children were describing the same game mentioned on a given day by opposite sex peers. Even if, in fact, children actually reported different instances of the same game on a given playground during a particular recess period, it is of interest to note that children of the same sex are more salient than opposite sex players.

The important exceptions to this general finding center on sex stereotypic pastimes. Specifically, among girls, soccer, volleyball, kickball and giant four-square all were reported as activity contexts in which greater numbers of opposite sex players participated. These are all games with relatively high role differentiations. For three of the four, team membership is a characteristic and, additionally, there is relatively high role differentiation in the one game (giant four-square) that is not a team sport. Team membership and role differentiation in play are hallmarks of complex games according to Lever.

For boys reporting characteristically low-complexity games (hopscotch, chase, tetherball), and non-game play (bars), more girls than boys are named as co-participants. Numbers reported in Table 1-8 are likely to reflect actual proportions of male to female participants although the numbers may in themselves not

be accurate. Children were asked to name as many children as they could recall as co-participants in play and to state the number of same and opposite sex players. Reports of numbers of children were decidedly subjective with co-participants in the same game reporting widely dissimilar numbers. Nonetheless, it was also true that proportions of boys to girls were almost without exception the same in logs compiled by all children reporting a specific game.

Status in games as an expert, sampler or shunner was expected to be extremely important in predicting a large number of variables definitive of social cognitive skills. Game status was determined by the type of game or play activity consistently named by a child.

The results displayed in Tables 1-11 and 1-12 state the obvious about children's reported modal activities according to children's status as expert, sampler or shunner. Unorganized, diffuse activity on the bars, at work or in watching others, for the most part, characterizes shunners of both sexes. Game experts by contrast are spread over a large variety of games while samplers participate in a more circumscribed set of activities than experts. Largest numbers of children of both sexes and grades are experts. In other words, the modal status for all children is that of a specific game aficionado.

The data for average group size (Tables 1-13, 1-18) illustrate the number of children of either sex reported by experts, samplers and shunners for their modal activities. Team games, especially kickball have largest numbers of children reported. Boys consistently outnumber girls as reported participants in play in team games generally. In fact, play on bars, at hopscotch and in other "feminine" pursuits represent the major activities in which greater numbers of girls than boys are reported as co-participants.

Complexity of the Learning Experience:

The major vehicle for presenting results on the complexity of one's learning experience inherent in children's play and game structures is a set of matrices (Figures 1-1, 1-5) each displaying relationships among a hierarchical array of structural dimensions or features.

A cluster of activities along a set of dimensions indicates that a set of characteristics is to a greater or lesser degree shared by members of the cluster. If games generally tend to cluster in uniform groups across different sets of dimensions describing, for example, cognitive variables, structural variables and game complexity variables, conclusions can be reached about the nature of these games overall just as different conclusions can be derived from other general trends, for example, the clear lack of similarity between a game or activity and any other game or activity across the board. All these analyses assume increased

Table 1-11

Percentages of Boys by Game Status Reporting
Specific Modal Activities

	3rd Grade			6th Grade		
	Shunner (N=7)	Sampler (N=19)	Expert (N=58)	Shunner (N=17)	Sampler (N=24)	Expert (N=61)
Bars	42.9	0.0	0.0	5.9	0.0	0.0
Basketball				5.9	12.5	3.3
Chasers	0.0	31.6	19.0	0.0	8.3	3.3
Football				5.9	45.8	32.8
Four-square	0.0				0.0	8.2
Giant Four-square				0.0	4.2	11.5
Hopscotch		5.3				
Jog				5.9		
Kickball		36.8	31.0		8.3	14.8
Racquetball/tennis						1.6
Soccer		5.3	31.0			
Tag		15.8	8.6	5.9	12.5	
Tetherball						1.6
Volleyball						19.7
Other ball/game	14.3	5.3	6.9	17.7	4.2	3.3
Work/walk watch	42.9		1.7	47.1		

Table 1-12

Percentages of Girls by Game Status Reporting
Specific Modal Activities

	Third			Sixth		
	Shunner (N-25)	Sampler (N-20)	Expert (N-29)	Shunner (N-17)	Sampler (N-10)	Expert (N-52)
Bars	44.0	0.0	0.0	35.3		1.9
Basketball						1.9
Chasers	4.0	20.0	31.0	5.9	10.0	7.7
Four-square	0.0	0.0	6.9		10.0	1.9
Hopscotch	8.0	35.0	27.6		10.0	15.4
Jog				11.8		1.0
Jump rope	0.0	5.0	0.0			
Kickball	0.0	15.0	10.3		50.0	3.8
Racquetball/tennis						1.9
Soccer			3.4			5.8
Tag	0.0	15.0	3.4			
Tetherball	0.0	10.0	13.8		20.0	36.5
Volleyball						21.2
Otherball	8.0		3.4	17.7		
Work/	32.0			29.5	0.0	0.0
Walk						

Table 1-10: Covedale Boys with 10 + Playground Logs By modal Activity and Average Numbers of Male and Female Co-Participants in Play

Modal Activity	Number Reporting Activity		Reported Number of Female Participants (F)		Reported Number of Male Participants (F)	
	(N=38)	(N=26)	3rd	6th	3rd	6th
All colors						
Bars	(2) 5.3%	(1) 3.8%	.9	1.7	1.9	1.1
Basketball						
Chase	(1) 2.6%		1.8		1.7	
Cheers						
Football						
Four-square		(4) 15.4%		1.2		2.5
Giant four-square		(5) 19.2%		2.5		9.9
Hopscotch						
Jog						
Jumprope						
Keepaway						
Kickball	(7) 18.9%	(4) 15.4%	.2		4.3	7.0
Kill The Man						
Racquetball						
Soccer	(18) 47.4%		.9		13.4	
Tag						
Tetherball		(1) 3.8%		3.4		.5
Volleyball		(10) 38.5%		10.8		15.1
Other ball						
(Practice)						
	(N=38)	(N=26)	32	3.0		1.6

Table 1-14: Covedale Girls

Modal Activity	Number Reporting Activity		Reported Number of Female Participants		Reported Number of Male Participants	
	3rd	6th	3rd	6th	3rd	6th
All colors						
Bars	(n=10) 35.7%	(5) 14.7%	2.19	2.03	.15	.44
Basketball						
Chase	(n=4) 14.3%		2.3		.7	
Cheers		(2) 5.9%		3.25		.75
Football						
Four-square	(=2) 7.1%	(4) 11.8%	2.0	4.9	0.0	.78
Giant 4-square		(3) 8.8%		2.2		3.7
Hopscotch	(n=4) 14.3%		2.1		.2	
Jog						
Jumprope						
Keepaway						
Kickball						
Kill the Man						
Racquetball						
Soccer						
Tag						
Tetherball	(n=8) 28.6%	(9) 26.5%	2.8	3.4	.3	2.0
Volleyball		(11) 32.4%		15.5		14.7
Other ball						
	(n=28)	(n=34)				

Table 1-15: Hoop Boys

Modal Activity	Number Reporting Activity		Reported Number of Female Participants		Reported Number Male Participants	
	3rd (N=16)	6th (N=26)	3rd	6th	3rd	6th
All colors						
Basketball		19.2%		.7		6.8
Chase	6.2%	3.8%	1.0	1.5	.7	2.5
Cheers						
Football	6.2%	73.1%	1.6	.6	32.0	13.5
4-square						
Giant 4-square						
Hopscotch						
Jog						
Jump rope						
Keepaway						
Kickball	87.6%		1.2		27.0	
Kill the Man						
Racquetball						
Soccer						
Tag						
Tetherball		3.8%		3.0		2.0
Volleyball						
Other/ball						
	(N=16)	(N=26)				

Table 1-16: Hoop Girls

Modal Activity	Percent Reporting Activity		Reported Number of Female Participants		Reported Number of Male Participants	
	3rd (n=19)	6th (n=10)	3rd	6th	3rd	6th
All colors						
Basketball		10%		1.0		5.7
Chase	5.3%	10%	3.5	3.0	1.8	1.8
Cheers						
Football						
4-square						
Giant 4-square						
Hopscotch	68.4%	20%	3.6	2.5	.2	0.0
Jog		10%		1.0		0.0
Jumprope	21%		6.6		0.0	
Keepaway						
Kickball	5.3%		.4		19.4	
Kill the Man						
Racquetball		20%		2.1		3.4
Soccer						
Tag						
Tetherball		30%		4.2		.7
Volleyball						
Other/ball						
	(N=19)	(N=10)				

Table 1-17: Oyler Boys

Modal Activity	Number Reporting Activity		Reported Number of Female Participants		Reported Number of Male Participants	
	3rd (N=29)	6th (N=27)	3rd	6th	3rd	6th
All colors						
Bars	13.8%		.53		4.27	
Basketball						
Chase	55.2%	14.8%	1.43	3.05	2.92	2.74
Cheers						
Football		37%		.98		5.47
4-Square						
Giant 4-square						
Hopscotch						
Jog						
Jump rope						
Keepaway		11.1%		.00		5.7
Kickball	6.9%	14.8%	0.0	.57	4.57	2.65
Kill the Man		3.7%		0.0		36
Racquetball						
Soccer						
Tag	24.1%	14.8%	.86	.80	3.17	3.9
Tetherball						
Volleyball						
Other/ball		3.7%				
	(N=29)	(N=27)				

Table 1-18: Oyler Girls

Modal Activity	Number Reporting Activity		Reported Number of Female Participants		Reported Number of Male Participants		Total Participants
	3rd (N=24)	6th (N=21)	3rd	6th	3rd	6th	
All colors							
Bars							
Basketball							
Chase	66.6%	38.1%	2.4	3.6	2.2	2.8	
Cheers							
Football							
4-Square							
Giant 4-square							
Hopscotch	16.6%	23.8%	2.4	1.9	0.4	0.09	
Jog							
Keepaway							
Kickball		33.3%		7.2		2.12	
Kill the Man							
Soccer							
Tag	16.6%		2.5		1.9		
Tetherball							
Volleyball							
Other/ball		4.8%		2.7		1.0	
	(N=24)	(N=21)					

The final set of dimensions examined the similarity of the variables of interest across a set of eight sensory motor skills and abilities (Bruininks, 1979). Only a single activity, walk/talk, is an isolate, unrelated to any other variable. The largest, tightest nucleus is formed by football, soccer, racquetball/tennis, volleyball and bars. This cluster is distantly related to the cluster four-square and giant four-square, and the cluster of jog/run and jumprope and even more distantly (.49) to tag. These clusters all join with the two variable cluster, basketball and imaginary play which have a relatively weak (.83) degree of association. Kickball and baseball form the last cluster with tetherball as a distant satellite.

Parallels can be drawn from a comparison of the clusters across the full set of five matrices. For one, the persistent association of soccer with football, which are in turn consistently linked with baseball, volleyball and kickball dramatizes the homogeneity of these team games. The other game relationship that remains intact across all five matrices is the linkage between four-square and giant four-square. Tag, chase, tetherball, and, in one matrix, imaginary play are consistently near neighbors in adjacent clusters or are, in fact, contained within the same four-square/giant four-square cluster. The solitary activities of jogging, bars and walk/talk are either isolates or distant satellites of all other games and activities.

Children who persist in choosing these relatively uncomplex playground activities and in avoiding either the team sports of football, soccer and baseball or the competitive but less role-differentiated play of four-square, tetherball and the like are unlikely to gain important social learning experiences. Specifically, persistent choice of less complex and hence, perhaps less cognitively, physically and socially demanding experiences as play on the bars, removes the child from (1) opportunities to rehearse and develop important skills related to physical and social abilities specifically which may have importance immediately in influencing the child's sociometric status with peers and, (2) experiences providing for anticipatory socialization into sundry adult roles. Of course, playground activities are not the sole context in which a child may join with peers in competitive play in challenging events. It may be that children who during lunch time recess typically hang around the periphery of the school yard, perhaps awed by the number and size of other children, perform energetically in games in their own neighborhoods.

Nonetheless, it does seem reasonable to expect that children who excel in playground skills, particularly those involved in playing a game, would be likely also to be popular with their classmates and generally to possess relatively high levels of social competence. It is this set of relationships that form the core set of skills and abilities examined in Study Two.

Variable Number

Variable List

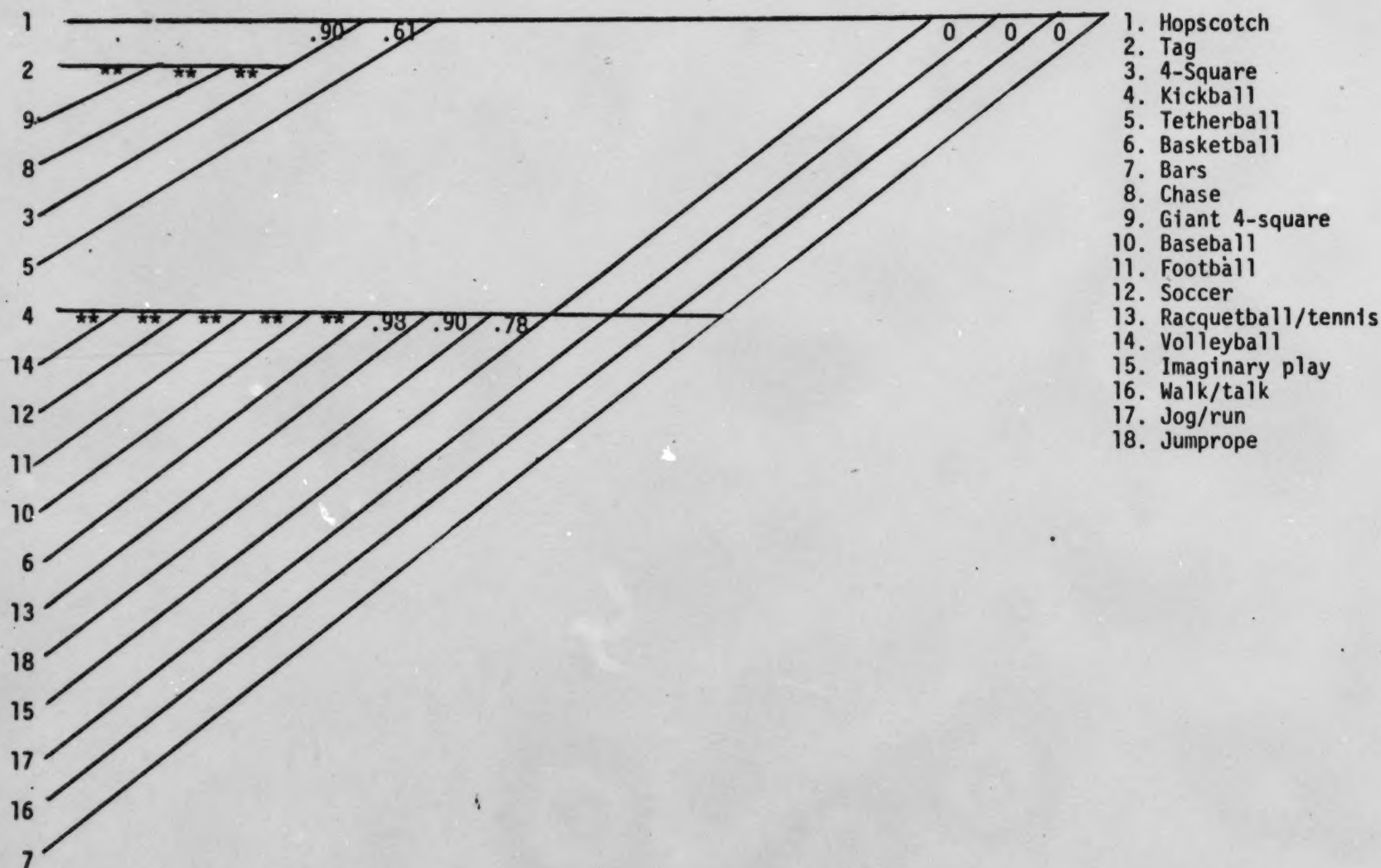
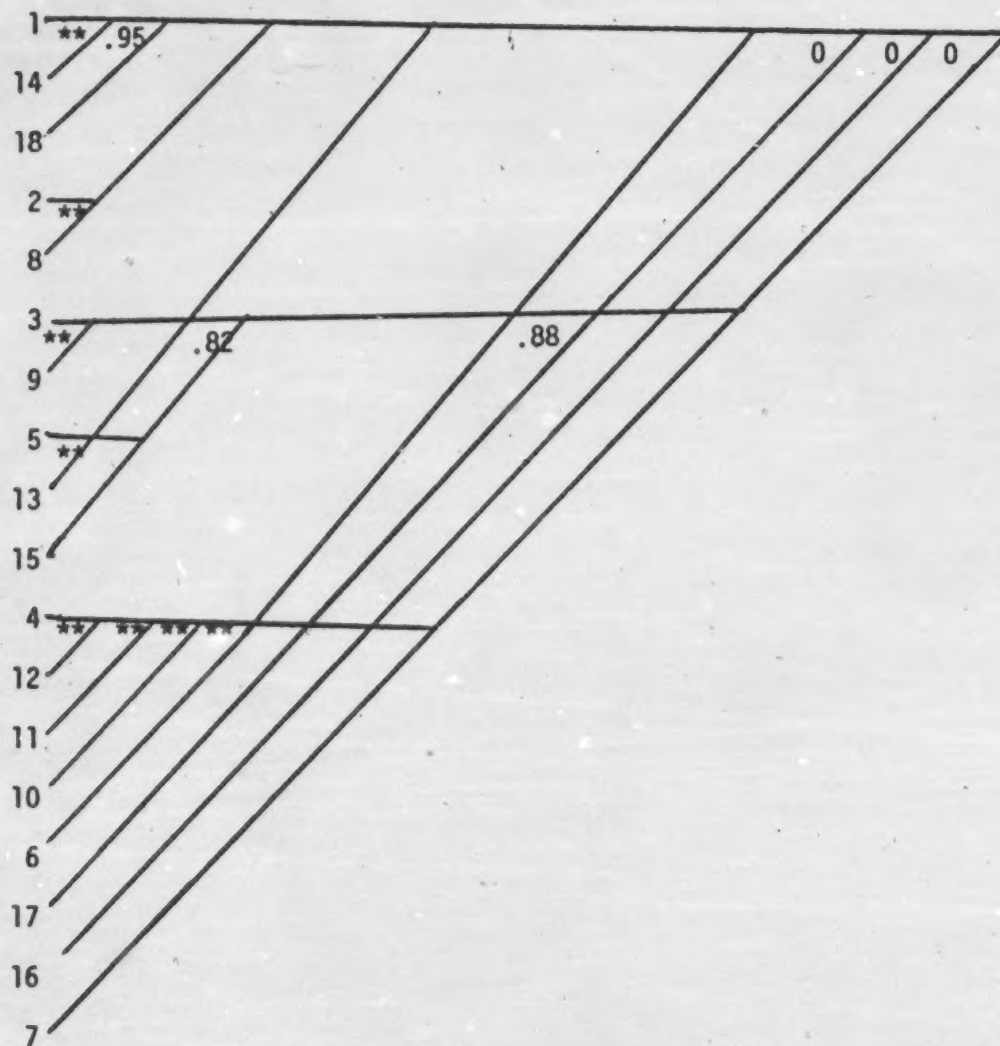


Figure 1: Cluster Analysis Tree Matrix Showing Measures of Association (Correlation Coefficients) Using Lever's (1978) Dimensions of Complexity of Play for Frequently Reported Playground Games and Activities.

Variable Number

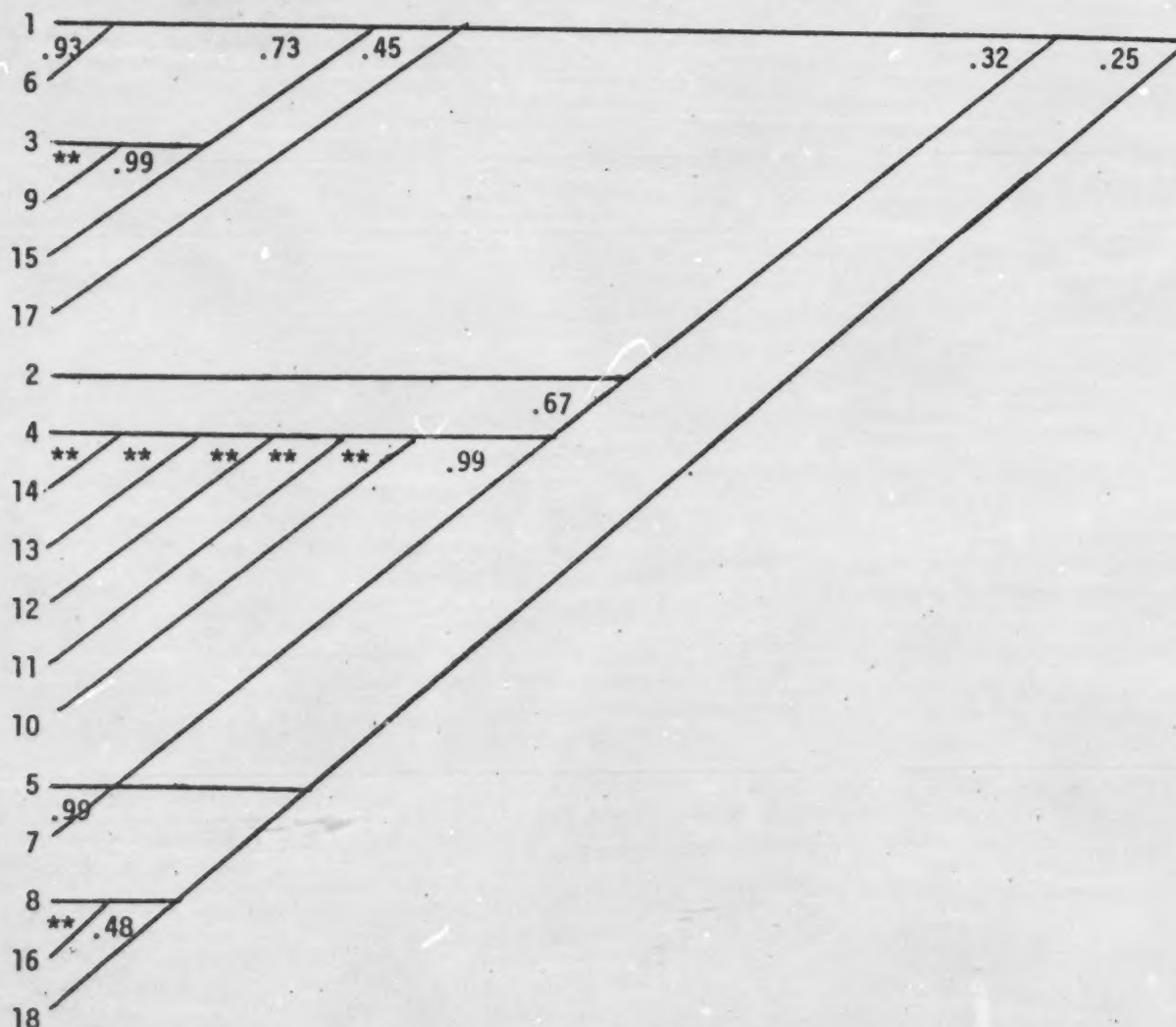


Variable List

1. Hopscotch
2. Tag
3. 4-Square
4. Kickball
5. Tetherball
6. Basketball
7. Bars
8. Chase
9. Giant 4-square
10. Baseball
11. Football
12. Soccer
13. Racquetball/tennis
14. Volleyball
15. Imaginary play
16. Walk/talk
17. Jog/run
18. Jumprope

Figure 2: Cluster Analysis Tree Matrix Showing Measures of Association Using Structured Dimensions (Avedon, 1971) for Frequently Reported Playground Games and Activities.

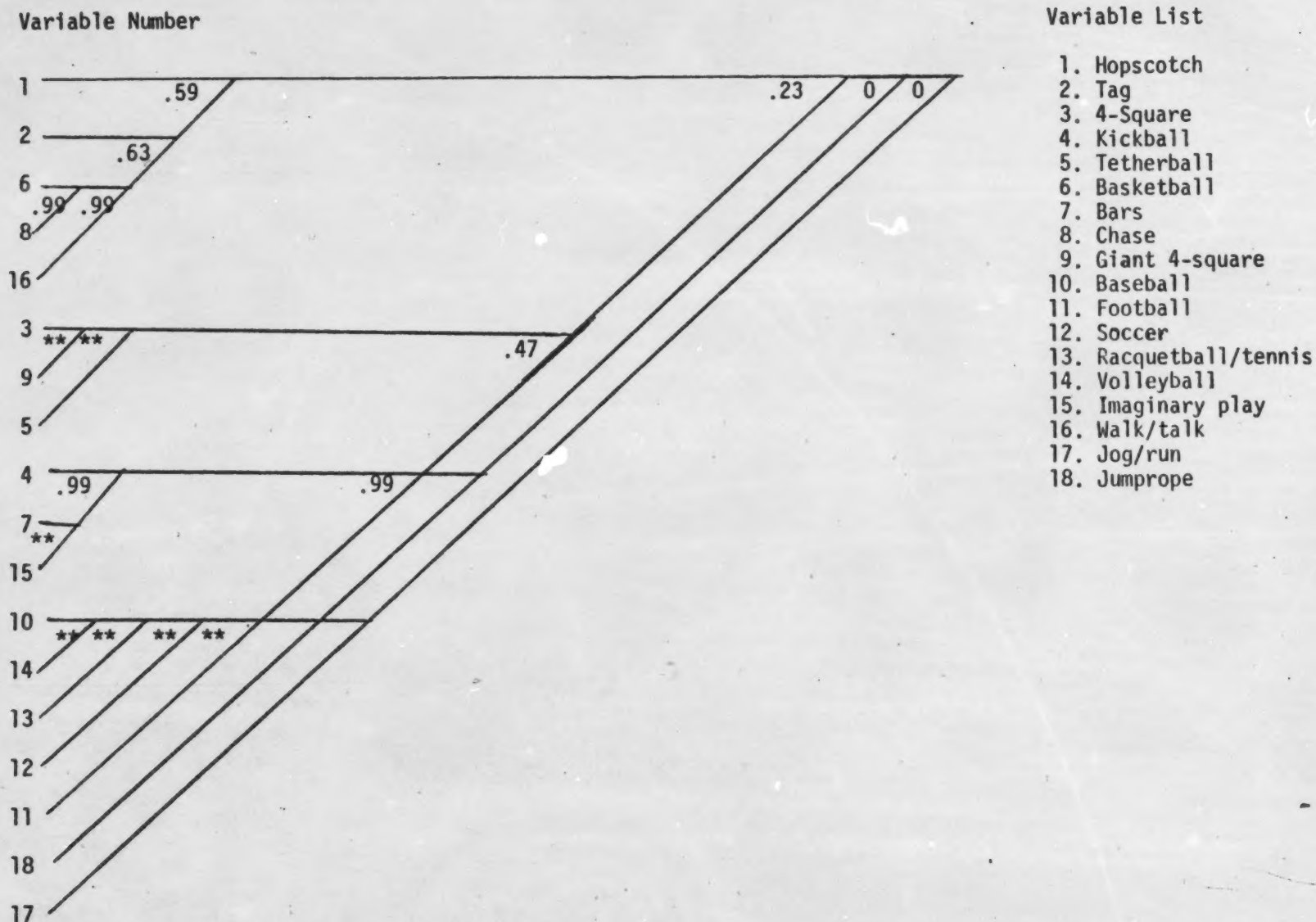
Variable Number



Variable List

1. Hopscotch
2. Tag
3. 4-Square
4. Kickball
5. Tetherball
6. Basketball
7. Bars
8. Chase
9. Giant 4-square
10. Baseball
11. Football
12. Soccer
13. Racquetball/tennis
14. Volleyball
15. Imaginary play
16. Walk/talk
17. Jog/run
18. Jumprope

Figure 3: Cluster Analysis Tree Matrix Showing Measures of Association Using Informational Content Dimensions (Avedon, 1971) for Frequently Reported Playground Games and Activities.



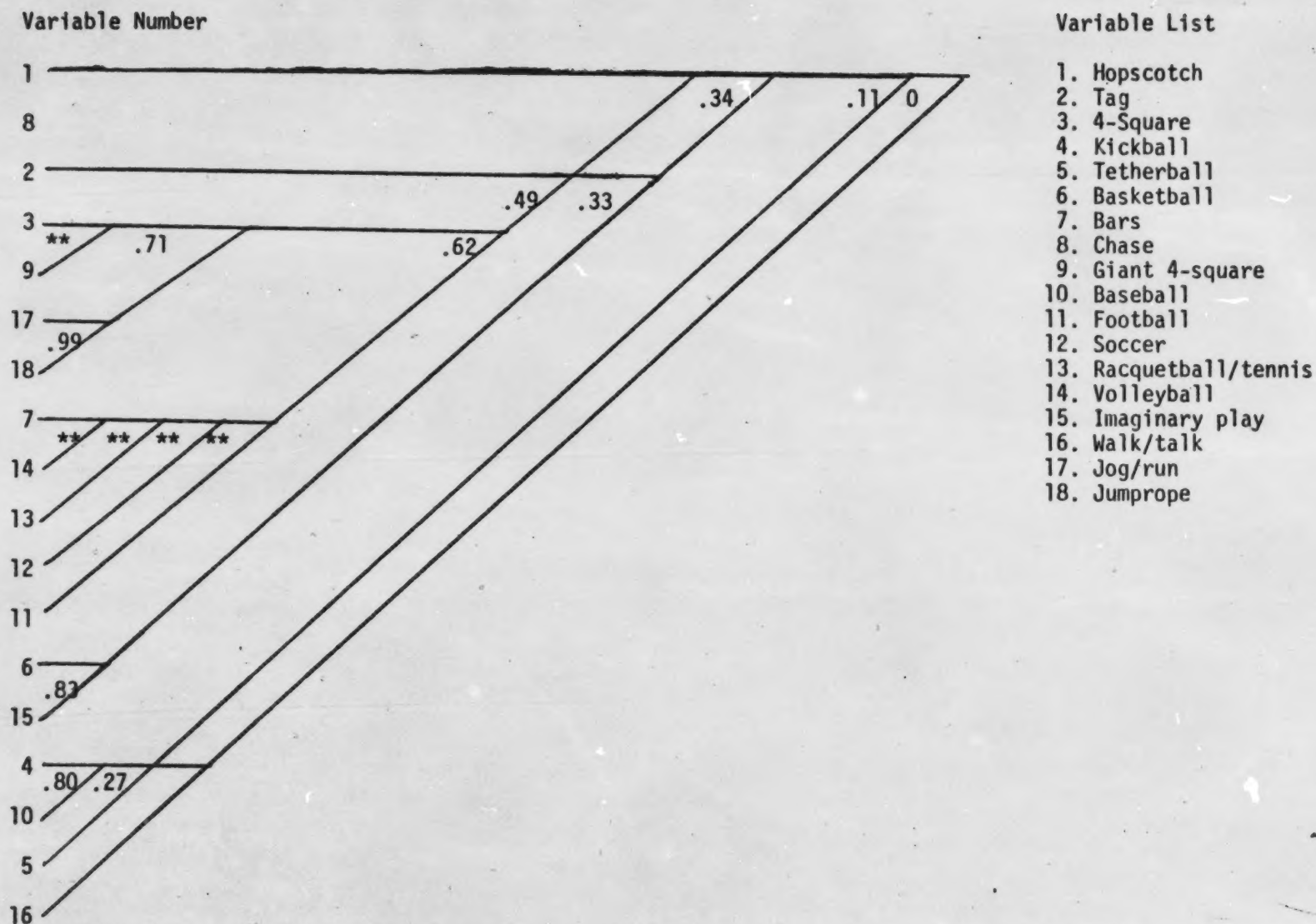
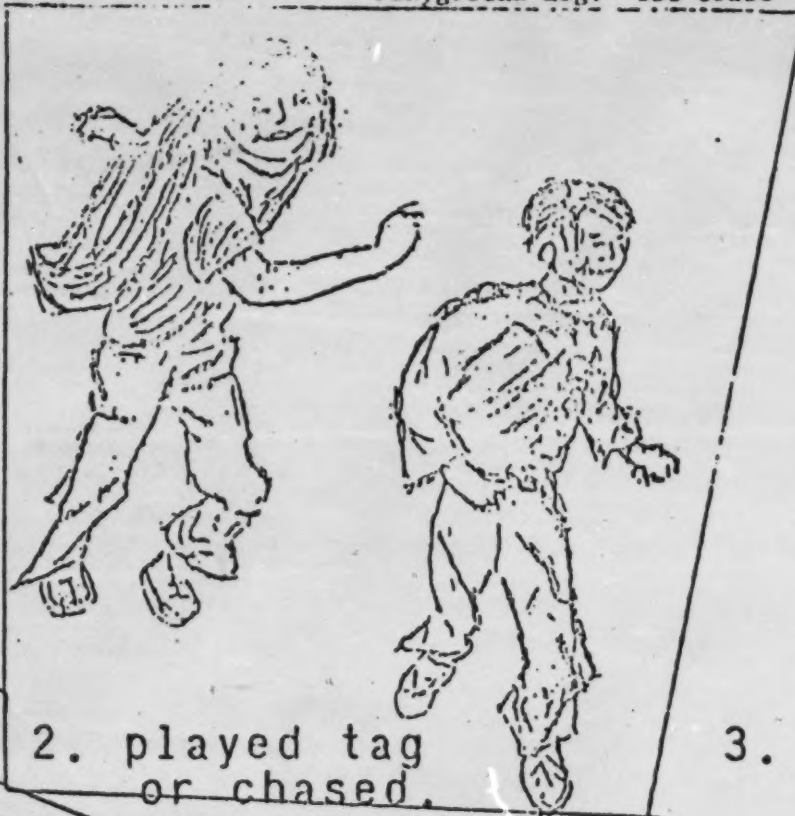


Figure 5: Cluster Analysis Tree Matrix Showing Measures of Association Using Sensory Motor Dimensions (Bruininks, 1979), for Frequently Reported Playground Games and Activities.



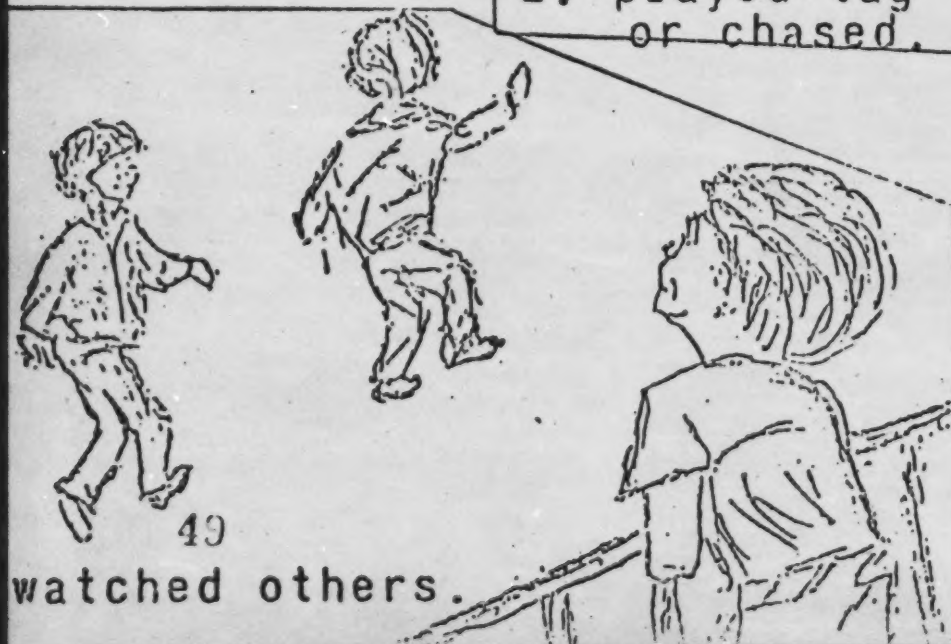
played hopscotch



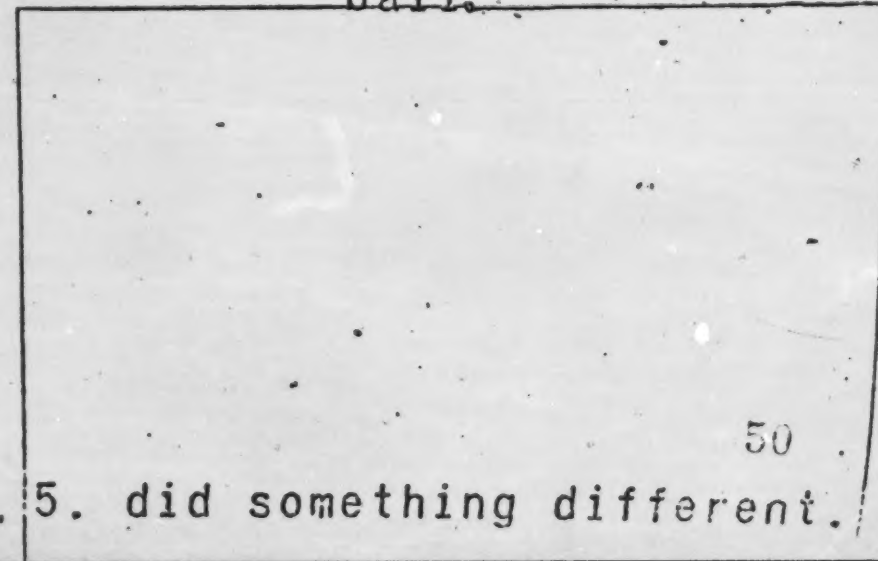
2. played tag
or chased.



3. played baseball,
kickball or foot-
ball.



49
watched others.



50
5. did something different.

My Name is _____

Today's Date is _____

Today at recess, I was with other children. Yes No

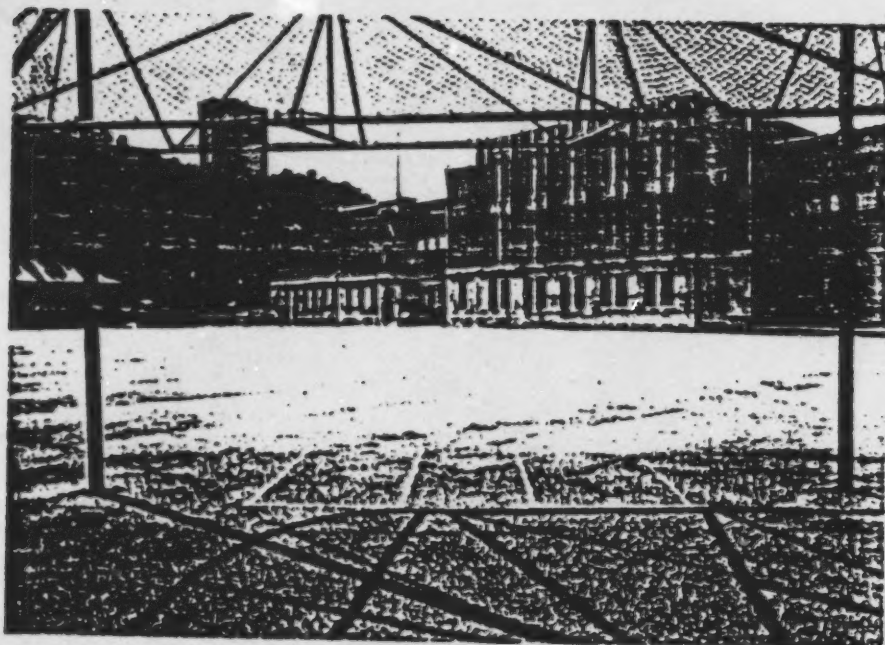
There were no, 1, 2, 3, 4, 5, 6+ other
children with me.

Girls were there. Yes No

Boys were there. Yes No

I was near the _____

_____ on the playground.



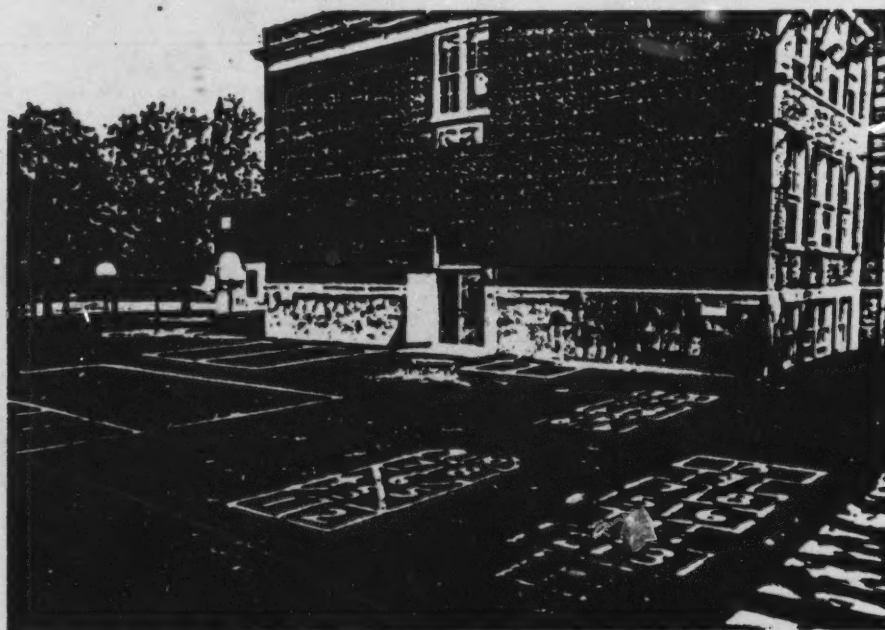
Oyler playground. Solid asphalt with faint lines for kickball or baseball visible here.



Oyler playground. Leaning basketball backboards and scattered bits of trash in the foreground, twin dumpsters often used as playsites in the background.



Hoop playground. Variety in a smaller space than at Covedale. Visible are "hobbyhorses" and basketball backboards as well as lines for racing, kickball, tetherball, and four-square.



Hoop playground. Hopscotch, racquetball, tetherball, and basketball areas are visible. Bars are under the shade tree to the left. The field, usable for football, soccer, et al, appears in the distance.

STUDY TWO: A LONGITUDINAL STUDY
OF SOCIAL DEVELOPMENT IN
SCHOOL-AGED CHILDREN

Kathryn M. Borman, Elaine Mueñinghoff
and Padmini Sheoran*

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SUMMARY OF STUDY ONE:

As revealed in Study One, when asked to provide records of their own freely-initiated playground lives, children who vary by grade, sex, race and school setting are found to favor different activities. Moreover, as documented in their self-reports, younger children (grades 2/3) are less likely than older children (grades 5/6) to have the status of game expert and are more likely either to sample a variety of games and pastimes or to shun them altogether. However, game status differences as a function of age are not marked, and children generally participate regularly as "experts" in a single pastime. Game preferences, however, are highly dependent upon grade and sex differences, with older boys participating in team games such as football and kickball that are more complex and more competitively structured than the games of younger children and particularly the games of girls. All this suggests that individual characteristics, capacities and abilities have a clear association with children's playground lives.

STUDY TWO: A LONGITUDINAL STUDY OF SOCIAL DEVELOPMENT IN SCHOOL AGED CHILDREN

RATIONALE:

The thrust of Study Two is to explore relationships between and among social cognitive skills, physical skills, intellectual functioning, age, sex, SES, and several important social/behavioral measures such as friendship ratings, popularity, and game playing status. Several of these variables have been explored in previous research, but in order to more fully understand social development and socialization, large numbers of variables must be simultaneously examined. In the following section a brief rationale for each of the variables will be described.

Social Cognitive Skills:

Children's overall interpersonal competence in informal playground interactions with peers is partially mediated by a number of social cognitive skills. These skills are seen generally to affect many aspects of children's psychosocial and intellectual development in addition to influencing their specific ability to negotiate interpersonal relationships in the context of free play (Rubin, 1976; Damon, 1977; Jencks, 1967).

The skills described below correspond to three important domains encompassing the landscape of social cognition as described by Eliot Turiel (1978). According to Turiel, three sets of systems are mastered in stage-like sequence over a stretch in the life-span of the developing individual, allowing attainment of a mature grasp of interpersonal relationships and personality systems. The domains comprise societal norms, patterns such as game rules or social conventions; characteristic psychological features, patterned sets of motives that underlie the behavior of self and others; and the justice system or moral dimension. Turiel argues that knowledge in the three areas is served by cognitive processes on the one hand and by sources of information external to the individual on the other. External sources include observation, communication and taking the perspective of another. The cognitive processes are generally described by Turiel and others in Piagetian terms. As such, assimilation and accommodations are the complementary modes of integrating information which enable the child to make sense of social relations.

The developmental nature of social cognitive processes and contents has been reviewed elsewhere (Turiel, 1978; Damon, 1977) and so will be treated only briefly here and with specific reference to the child's interpersonal relations in the context of playground life. In Study Two the following set of social cognitive skills, corresponding to the three systems outlined above, are examined in detail:

- a) Knowledge of social conventions (understanding the rules of the game) - In order for the child to play the game correctly, he/she must implicitly understand the rules of the game. The young child may not be able to articulate the full range of rules he/she enacts in playground games; however, children as young as seven years of age are capable of recognizing rule violations in video taped presentations of familiar playground games (Borman, personal observation). The child's understanding of rules and recognition of rule violations form the basis for the child's capacity to maintain the game. Game maintenance skills seem clearly related to interpersonal skills generally and interactional skills specifically (Garvey, 1977). It is essential in any setting where there is a social interaction that the sequence of turns and permissible behaviors

are followed according to implicitly understood rules. Such is the case in games in particular. Breaking rules has serious consequences for players with subsequent loss of a turn or expulsion from the game in extreme cases in which the violation is perceived to be intentional.

- b) Taking the perspective of others - In taking the perspective of another, the child demonstrates an ability to coordinate different frames of reference and to infer motives from another's behavior. Perspective taking serves two important functions in the specific context of game play and in more general social interaction. Specifically, this skill underlies both the child's understanding of motives and actions of others who are partners in play and the child's ability to devise strategies to surpass others in competitive play.
- c) Moral judgment - Since playing a game involves playing according to a set of rules, it is frequently necessary for a child to make moral judgments concerning the behavior of the other players. According to the rules generally practiced by elementary school children, for example, a child tagged three times in freeze tag becomes "it". If a child, confronted by the evidence that he/she has been tagged three times and hence is "it", denies those consequences, there are clear implications for the moral order of the game. A child's ability to link motives with consequences and to mete out appropriate judgments for wrongdoing is important to the ability to engage in successful social interaction generally and is likely to be associated with familiarity with game-playing rules and frequency of play in certain games.

In addition to social cognitive skills, other individual abilities are likely to be of consequence to the child's playground experience. Those skills are described as follows:

Physical Skills:

Physical skills are important in games which require coordination of movements made by two or more individuals in the context of play, for example, in throwing and catching a ball in baseball. There is some evidence that the skill with which a child engages in play at certain games has some bearing upon his/her inclusion in games (McGraw and Tolbert, 1935). Bruininks and his associates (1978), after a careful review of the literature, developed a set of motor tasks judged as important indicators of motor functioning in children and adolescents. Eight indicators of motor skill proficiency were identified as critical to the development of gross and fine motor skills. Tasks were subsequently developed by Bruininks and his associates to assess these areas.

Intellectual Functioning:

Intelligence is a many-faceted construct. A particular dimension of intelligence required in successful negotiation of free play and games is the ability to coordinate and synthesize different but congruent patterns of objects (Kirby and Jerman, 1975). This skill is clear in the game of baseball, for example, where children must coordinate the moves of players on two teams against the backdrop of the ball diamond. Intelligence in game play, then, is seen as the ability simultaneously to synthesize separate elements of a stimulus field into a system of relationships.

Age, Sex, and SES:

Other major variables considered are grade as proxy for age, school as a proxy for both socioeconomic status (SES and racial group composition, and sex. Previous research has shown the importance of these variables in their association with activities children elect to pursue in free play situations (Lever, 1978; Polgar, 1976; Eifermann, 1972). Also, several additional variables were drawn into the analyses as behavioral indicators of children's success in negotiating academic, interpersonal and/or game playing interactions. These variables are described below:

Behavioral Measures:

a) Game status - Children's status as game expert, game sampler or game shunner was determined by playground log self report data according to the frequency with which they mentioned taking part in games and other activities. Events other than games included crossing guard duty, work in the lunchroom and the like, hanging around, watching others, walking and talking as well as play in non-game contexts. The latter included play on bars and jungle gyms; spontaneous rehearsal of a class play and the like.

b) Teacher Ratings - Teacher's ratings of children's academic and social skills appear to be related, sometimes in pointed ways to children's social reasoning. For example, Kurdek (1978), found the association among elementary school children of good performance on sociomoral dilemmas with negative teacher appraisal of school conduct. Kurdek's interpretation of these findings makes explicit reference to Piaget's (1961) discussion of children's verbal conflicts as an arena for the development of skills in making moral judgments. Children who fight and argue are likely to develop social perspective taking skills as they accommodate the opposing views of their peers.

c) Popularity (Peer Nominations) - Common sense tells us that children who are actively sought by their classmates as either work or play partners would likely be those children who display skills in making social judgments. Although it seems sensible to assume that popularity is positively related to social reasoning, there is some indication that this relationship

might not be consistent across the period of middle childhood. Rubin (1973), for example, found that communicative egocentrism was related to popularity in kindergarten and grade two children but was not related in older children at grades four and six. The nature of the relationship between popularity and decentering abilities in areas other than communication has, so far as we know, not been examined. Perhaps, because they fight and argue more, children with skills in making social judgements may be as unpopular with peers as they are with teachers.

d) Friendship Ratings - Primarily to allow subsequent analyses of sociometric matrices of classroom cliques¹, a second approach to assessment of children's status among their peers was introduced at Time Two only. The index used in this connection allowed every child in each classroom of interest to make a judgement about each classmate (as opposed to making nominations on a limited number of classmates as in the popularity procedure). In Study Two the index served two purposes: First, it provided a reliability check for the popularity measure and second, it served as an index of a child's status as a best friend, someone generally well-regarded, someone indifferently regarded or someone seen as an unknown quantity.

PURPOSE:

Study Two is focused upon children's abilities to coordinate simultaneously differing (1) social perspectives, (2) interpersonal frames of reference and, (3) non-social objects governed by social conventions (game rules), i.e., procedures regarding placement of markers in a game of hopscotch. These capacities can be seen as dimensions of the child's ability to engage in reflective reasoning on social matters.

Study Two provides a developmental psychological and longitudinal perspective on internalized sets of abilities, skills and characteristics seen as important contributors to children's negotiation of play. Its purposes are as follows:

1. To explore the relationship among (a) three social cognitive skills (understanding game rules, cognitive perspective taking and moral judgment); (b) physical skills; (c) teacher ratings of both academic and social skills; (d) popularity (peer nominations) and (e) friendship ratings (assessment of a child's status as a friend or non-friend).
2. To determine the extent to which the variables listed above are a function of grade (age), school setting and game status. Specifically the following independent variables are examined: grade (2/3, 5/6); school setting (Oyler: white urban Appalachian working class, unemployed; Covedale: racially mixed lower middle to middle class; Hoop: racially mixed, lower middle to middle class); game status (shunner, sampler and expert).

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¹These analyses will be performed as outlined in a recently prepared small grant submitted to NIE with Harold D. Fishbein titled "Family Structural

3. To determine the nature of longitudinal changes in children's social cognitive skills, intellectual functioning and popularity.
4. To explore the nature of the causal relation among children's social cognitive skills and to explore the nature of the causal relation between children's popularity and one of those skills, understanding game rules.

RESEARCH METHODS

Methods followed in conducting the research over the course of the study's two-year time frame remained the same except where noted; therefore, similarity of methods for data collection at both Time One and Time Two of the study may be assumed. Three sets of data analysis procedures were followed: correlational (computed within Time One and Time Two separately); analysis of variance (computed within Time One and Time Two separately), cross-lagged panel correlations and multiple regression (computed across Time One and Time Two).

Subjects:

Subjects for the study initially included all children enrolled in the second/third and fifth/sixth grades at Cove-dale, Hoop, and Oyler Elementary Schools in the school years, 1978-79 and 1979-80.

Subjects in all cases were selected according to game status as determined by self-report data gathered from playground logs administered during a three-week period in Fall, 1978 and again in Fall, 1979. "Experts" were those who reported playing a single game 50% or more of the time. "Samplers" were those who reported playing a variety of games 70% of the time, but did not engage in any one activity 50% or more of the time. "Shunners" were those who participated in game avoidance activities such as watching others, talking with friends and just "hanging around" at least 50% of the reported instances of playground activity.

Two boys and two girls at each grade level of the three schools were selected to represent the three game statuses. Initial selection was made randomly from among the three status groups at Time One. Alternates were selected to fill empty cells for Time Two.

During the playground log phase in the fall and in the later individual interviews regarding friendship choices, approximately 401 children participated. A subset of 71 subjects served as subjects for Study Two over both years of the research. An additional group of 40 subjects participated at either Time One (1978-79) or Time Two (1979-80) but did not participate at both Time One and Time Two of the study. Data are reported separately for Time One, Time Two and longitudinally over Time One and Time Two using data for the 71 subjects present in both years.

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MATERIALS AND PROCEDURES

Social Cognitive Measures:

- a. Hopscotch/Freeze tag, Time One 1978-1979) Video Tape:
and
Hopscotch/Kickball, Time Two (1979-1980) Video Tape:
Understanding the Rules of the Game.

Children's understanding of game rules, recognition of cheating and accidental errors and comprehension of factors leading to violations were determined by their responses to the video taped portrayal of hopscotch and freeze tag (Time One) and hopscotch and kickball (Time Two). Both measures were designed to assess children's recognition of rules and rule violations for those games which were played with the most frequency at all three playgrounds.

Subjects responded to the video taped portrayal of (1) correct turns played according to core rules, (2) intentional rule violations, i.e., cheating and, (3) mistakes resulting in breaking a game rule, e.g., stepping on the line in hopscotch.

After the child was introduced to players in the video taped sequence of play, he/she was asked to describe a hypothetical turn at play to establish a working knowledge of the rules of the game. While viewing the tape, the child was instructed to identify and explain rule violations as she/he noted them in the video taped presentations. Each child monitored game activity on a screen and in the instance of a perceived violation depressed the "stop" button on a Sony Beta Max (SLO-340) video tape cassette player. Points were assigned for correct identification of an error. The scoring procedure was designed such that children who appropriately ascribed motives of cheating or lack of intent to cheat to the actions of players portrayed in the video tape were assigned a higher score (2 points) than those who did not ascribe motives at all (lowest score, 0) and those who mentioned physical features only (middle score, 1). Scores ranged from 0-30 for the Time One measure and from 0-50 at Time Two. It should be pointed out that a different measure using the same format was developed at Time Two. Scores from each subtest were combined and used as a major variable (Understanding Game Rules) in subsequent analyses.

- b. Chandler's Bystander Cartoons: In this procedure, each child was presented a series of cartoons developed by Chandler to assess the capacity to take the perspective of others. Two sets of cartoons, "the bakery" and "the sandcastle" were selected for use. At the outset of the procedure, each child was shown the cartoon, composed of an eight-frame sequence of

²See Appendix I for a discussion of the overall "goodness" of these measures.

events, and was asked to relate the story as he/she conceptualized it from the perspective of the central figure in the narrative. Probing by the experimenter throughout the child's discourse insured that the child understood the narrative line of the story. At approximately the midpoint of each cartoon episode, a bystander is introduced who observes the main character acting in a manner causally related to an event occurring before the bystander's arrival. With direct inquiry, the experimenter probed the child's perception of the main character's affective response to the circumstances surrounding cartoon events and the character's behavior. The child was then asked to recount the story from the bystander's point of view. Using a procedure developed by Chandler and modified by Kurdek (1977) to give less weight to egocentric responses, each sequence was scored to take into account the degree to which the child was able to keep his/her own knowledge of prior events from influencing his/her interpretation of the bystander's perception of events. Total scores for each dilemma ranged from 0-4.

c. Selman's "First Things": Making Moral Judgments:

Children's skills in making moral judgements were assessed by using Selman's "First Things," an audio-visual filmstrip. In this procedure, each child was presented with two dilemmas developed by Robert Selman and distributed by Guidance Associates. In one, a school-aged child named Kathy must decide whether she should accept an invitation to attend a show with a friend, or keep a promise to participate in less novel play with an old friend. In the second dilemma, a young boy, Tom must decide whether he should buy a friend a puppy for his birthday even though the boy, who recently lost his dog, claims that he does not want another pet.

A procedure developed by Selman and Byrne (1974) and modified by Kurdek (1977) was used to determine the child's level of cognitive perspective taking, the ability which underlies the child's capacity to reason through aspects of the moral dilemma or problem confronting each of two children in the situations described above. Six standardized questions designed by Kurdek to measure the child's level of cognitive perspective taking were asked by the experimenter after the child had viewed the filmstrips. Each response was assigned a score which reflected the "degree to which the child realized that two persons could consider each other's viewpoint simultaneously and mutually" (Kurdek, 1977). Total scores for each dilemma ranged from 0-20.

Recent evidence suggests a strong correspondence between social perspective taking and skills in making moral judgments. Therefore, scores obtained from children's performances on both the Chandler Cartoons and the Selman Measure were combined to provide a single score (Global Social Cognition) used as a major variable in subsequent analyses.

Bruininks-Oseretsky Test of Motor Proficiency (Short Form): Children's Motor Skills:

Children's motor skills were judged by their performances on the short form of the Bruininks-Oseretsky Test of Motor Proficiency published by American Guidance Associates. Each of eight subtests included in the short form of Bruininks-Oseretsky battery is designed to assess an aspect of motor development. Subtests include measures of (1) running speed and agility, (2) balance, (3) bilateral coordination, (4) strength, (5) upper limb coordination, (6) response speed, (7) visual motor control, and, (8) upper limb speed and dexterity.

The short form, consisting of 14 items representative of the described subtests, took approximately 15-20 minutes to administer. Results were recorded immediately. Raw scores were later transformed into standard scores according to procedures described in the manual accompanying the Bruininks-Oseretsky Test. Standard scores ranged from 24 to 75. Scores were used as a dependent measure in subsequent analyses. Scores obtained on the Bruininks were later used in correlational and regression analyses at Time Two.

Ravens Coloured Progressive Matrices:

The Ravens Coloured Progressive Matrices is a set of geometric figures designed to tap the child's intellectual and conceptual skills. This test was chosen both because it has been designed to minimize cultural bias characteristically associated with intelligence tests and because it has been used in other, similar studies (see for example, Kurdek, 1977). Children were individually administered Forms A, Ab and B of the test. Standard scores ranged from 0-36.

The Ravens scores were used as a dependent measure in later analyses and as a controlling variable in a series of correlational and cross-lagged panel analyses.

Playground Logs:

Procedures for data collection were structured to include the administration of playground logs at the outset of the project at both Time One and Two. The procedures for the design and administration of playground logs is described in Study One and so will not be presented here. Playground logs provided the information on the major ascribed characteristics of interest: grade, sex, school and game status.

Teacher Ratings:

Teachers were asked to respond to two dimensions of children's school experience. First, teachers were asked to judge each child's academic performance by ranking an individual child in the top fifth, second fifth, middle fifth, next fifth

and lowest fifth in comparison to the academic performance of others in his or her homeroom group. Next, teachers used the same ranking procedure to judge each child's social skills, defined as the capacity to initiate and maintain friendly relations with adults and other children.

Popularity (Peer Nominations):

Each child participating in Study Two was asked to nominate and rank order three individuals from his or her homeroom as preferred choices, first, in carrying out an assigned class project and second in playing a game or participating in a free play situation.

Friendship Ratings:

As in the case of teacher ratings, student ratings called for the rank ordering of each individual in each homeroom of interest as a best friend, someone liked, someone considered okay, someone not very well liked and someone not known very well (and therefore about whom a judgment difficult to make). This procedure was carried out for each child in each classroom, allowing inclusion of all children enrolled in each grade in each school of interest.

RESULTS³

Time One and Time Two Analyses:

Introduction:

Two separate sets of analyses were conducted on data collected at Time One and at Time Two. In order to explore relationships among the major variables of Global Social Cognition, Understanding Game Rules, intellectual functioning, popularity, peer nominations, and teacher ratings these analyses were carried out with the following ascribed and behavioral variables: school (a proxy for socio-economic status and racial/ethnic group composition), grade (a proxy for age), sex and game status (expert, sampler and shunner). First, correlational matrices were calculated using the above major variables. Because age and intellectual functioning are usually associated with measures of social cognition (Kurdek, 1977; Keating and Clark, 1980), partial correlations also were computed controlling for intelligence (as measured by the Ravens) and grade level.

Time One:

Relationships Among Major Tasks:

To investigate the matrix of relationships among the major measures of interest, zero-order correlations were computed using data collected for the full set of subjects present at Time One (n=97). Results of the analysis presented in Table 2-8a show a positive and weak, but significant relationships between Global Social Cognition and Understanding Game Rules (Pearson $r=.21$, $p .05$). Although a positive correlation was obtained also for Global Social Cognition and performance on the Ravens, this correlation and the negative correlation between Global Social Cognition and popularity were both nonsignificant.

The only remaining significant correlation in this matrix is the relationship between Understanding Game Rules and intellectual functioning (Ravens) ($r=.24$, $p < .02$).

When partial correlations controlling for grade were computed, as reported in Table 2-9a, none of the previously calculated relationships remained significant. A partial correlation controlling for scores on the Ravens indicates a weak, but significant, relationship (Pearson $r=.19$, $p .05$) between Global Social Cognition and Understanding Game Rules as shown in Table 2-10a. A third matrix (Table 2-11a) reporting partial correlations controlling for both variables (grade and Ravens scores) also indicates nonsignificant relationships among all major measures.

³The results of preliminary analyses are reported in Appendix II of this section of the report. Tables referred to in the body of the report are included as Appendix III.

Relationship Between Ascribed & Behavioral Variables and Performance on Major Tasks:

In order to examine the pattern of relationships between ascribed and behavioral variables and performance on major tasks, a series of three-way analyses of variance (ANOVAS) were computed. In the first analysis, as reported in Table 2-12a, a main effect was observed for grade with Global Social Cognition as the dependent variable. However, other sources of variation calculated as main effects (sex and game status) were not significant. A single two-way interaction, grade x game status approached significance ($p=.06$).

Next, sources of variation were computed for Understanding Game Rules as the dependent measure. Results of this analysis reported in Table 2-13a show grade as a significant main effect ($p<.001$) with game status approaching significance ($p<.07$). A single two-way interaction (sex x game status) was near significance at $p=.06$. Finally, the three-way interaction of grade, sex and game status was significant ($p=.04$).

No effects or interactions were observed in the analyses of variance for popularity (Table 2-14a) or intellectual functioning (Table 2-15a).

Time Two:

Relationships Among Major Tasks:

At Time Two, in addition to the measures of Global Social Cognition, Understanding Game Rules, intellectual functioning and popularity, two rating scales and a measure of motor skill proficiency were introduced. Also, it should be kept in mind that the measure developed at Time Two to assess children's knowledge of game rules included video taped presentations of hopscotch and kickball, incorporating different stimuli than at Time One but in a similar format.

To supplement the popularity measure an additional peer rating form was administered. This allowed the ranking of each child as a best friend, someone who is liked, etc. in each classroom at grades three and six in each of the three schools. Sociometricians (notably, Mallinan, 1980) have argued that procedures such as the popularity index artificially restrict the range of choices and produce measurement error in subsequent analyses. A procedure similar to the peer ratings form was used in scales for separate teacher ratings of children's social skills and academic achievement. Finally, the short form of the Bruininks-Oseretsky Test of Motor Proficiency was administered.

Correlations for the full set of tasks and measures (Table 2-8b), reveal the same pattern of relationships among the three original measures at Time Two as was apparent at Time One with the exception of the relationship between popularity

and Global Social Cognition. This has shifted from a weak and negative relationship to a moderately strong and positive relationship. This may be because the popularity index at Time One was based upon a set of differently constituted classrooms than at Time Two, resulting in unique pools of candidates for peer nominating at each time. In other words, different sets of children were available as nominees at Time One and Time Two because of shifts in class rosters from one year to the next. Although the correlational coefficient for Global Social Cognition and Understanding Game Rules remains positive, the association is weak and is not statistically significant. The association between Understanding Game Rules and performance on the Ravens (Pearson $r=.47$, $p<.001$) is stronger than at Time One. As at Time One, popularity is not significantly related to any of the other major measures.

Among variables added at Time Two, teacher ratings were positively and significantly related to children's motor skill proficiency as measured by the Bruininks-Oseretsky (Pearson $r=.32$, $p<.02$) and to children's performance on the Ravens (Pearson $r=.48$, $p<.001$). A near-significant correlation (Pearson $r=.34$, $p=.06$) was computed for the Bruininks-Oseretsky and Ravens measures.

When partial correlations controlling for grade were calculated, the preponderant number of relationships to emerge as strong correlations were those computed on measures added at Time Two. The single exception was the positive and high correlation between Understanding Game Rules and intellectual functioning. Thus, the strong correlations among measures and tasks reported in Table 2-8b persist. However, patterns of weak associations also endure, particularly the low correlations associated with the popularity measure. As seen in Table 2-9b, there is in addition to the persistent associations among measures just noted, another previously insignificant relationship, a moderately strong partial correlation between popularity (peer nominations) and friendship ratings (Pearson $r=.32$, $p<.02$).

When partial correlations were calculated controlling for scores on the Ravens at Time One, teacher ratings again emerged as the variable strongest in its associations with other measures as seen in Table 2-10b. Three positive, low to moderate correlations were computed for this variable. Understanding Game Rules is moderately and significantly correlated with two measures (the Bruininks-Oseretsky and the Ravens). Also, the Bruininks measure is positively associated with children's friendship ratings.

The last correlational matrix (Table 2-11b) in this series at Time Two closely resembles those just described. Here both grade and Ravens scores at Time One were partialled from the equation.

In summarizing results of correlational analyses at Time One and Time Two, it is clear that there are strong similarities between the two sets of data. The major variables of interest, Global Social Cognition and Understanding Game Rules

appear to be governed by an age factor and also to a less marked extent by an intelligence factor. Moreover, although at Time One there was a positive relationship between Global Social Cognition and Understanding Game Rules, this relationship weakened at Time Two to the extent that it was no longer statistically significant. Also, additional measures at Time Two, particularly the test of motor skill proficiency, allowed further discrimination between the two measures. Children's motor skill proficiency showed a clear association with their abilities in Understanding Game Rules but not with their performance on the tasks comprising Global Social Cognition.

Relationships Among the Variables:

In the first three-way analysis of variance at Time Two, as reported in Table 2-12b, sources of variation were computed for Global Social Cognition. Significant main effects were obtained for grade and school, as were a significant two-way interaction involving the two.

The second analysis of variance to be performed is presented in Table 2-13b. Sources of variation for Understanding Game Rules include grade, sex and school as main effects. These findings should be understood with reference to Table 2-7a and 7b presented in Appendix II. Grade differences are accounted for by differences in performance by third and sixth graders with older children obtaining higher scores on the average. Also, boys tend to out-perform girls on this measure. School effects can be interpreted in light of the generally poorer showing on this task by Oyler children. In general, these results correspond to findings at Time One although game status at Time One was a more important source of variation than in similar analyses at Time Two.

A third analysis of variance (Table 2-14b) shows no significant main effects or interactions for children's work and play nominations. The fourth analysis of variance at Time Two corresponding to a similar analysis at Time One is reported in Table 2-15b. Unlike the comparable analysis at Time One where no significant main effects or interactions were observed for the Ravens measure, at Time Two there were significant main effects for both grade and school as well as a significant interaction, grade x sex. A second two-way interaction, grade x status approached significance ($p=.06$).

The ANOVAS were run on measures introduced at Time Two. An analysis of variance was carried out for scores on the Bruininks-Oseretsky Test of Motor Proficiency. As shown in Table 2-16, two significant main effects were observed, one for grade and a second for sex. A grade x sex effect was the only significant two-way interaction here.

Finally, an analysis of variance for teachers' ratings reveals only one significant source of variation. As shown in Table 2-17, a significant interaction was determined for grade x sex.

DISCUSSION

The general finding across Time One and Time Two of developmental trends associated with children's performances on the measures of interest in this study was consistent with results reported in a number of previous studies (Rubin, 1973; Kurdek, 1977; Walker, 1980). These trends held for children's performance on the two established social cognitive measures (Chandler Cartoon Sequences and Selman's "First Things") as well as for their skills in understanding social conventions as measured by task performance on the Understanding Game Rules measure. The clear association at Time Two of school with performance on all these measures suggests the importance of social background variables, particularly, socioeconomic status and ethnicity. Urban Appalachian children from less economically advantaged backgrounds lagged behind the others. Since most previous research in this area has been confined to homogeneous groups of children, this finding takes on particular importance in guiding future research.

There are also patterns present in these results other than the school and developmental correspondences just noted for performance on social cognitive measures. One of the most provocative is the pattern of association between children's status as preferred work/play partners and their overall social competence. Earlier research (Rubin, 1973) indicated a declining relationship with advancing age between popularity and performance on perspective taking tasks with popularity in younger but not in older children related to their overall skill in decentration. In this study popularity was in fact negatively related to performance on the perspective taking tasks and socio-moral dilemmas during the first year and positively related to performance on these same measures during the second year. Also, teachers' ratings taken in this study at a single time (the second year) were positively related to social cognitive abilities. It may be that peers in selecting a favored work/play partner simply do not consistently focus upon individuals who display behaviors contingent upon skills in reflective reasoning. It may be that reflective reasoning skills do not necessarily manifest themselves in cooperative, altruistic behaviors (the presumed variables underlying peer and teacher choices). This, however, seems unlikely since adults (teachers) would likely focus on these behaviors in rating children as socially skillful. It could be that children value skill in playing games, confronting bullies, or outwitting adult authorities rather than the range of positive behaviors that adults, and particularly teachers, may value. These inconsistent findings may also reflect a sociometric problem. Popularity scores are derived from a group of children making judgments about an "artificial" collectivity of peers. Classroom groups, after all, are not stable from year to year and it seems likely that children who are favored one year may not be preferred the next as a result of changes in classroom task structure, style of teaching, etc., (Bossert, 1978). It may be that sociometric measures are merely whimsical indices of children's peer group status and so highly dependent upon the immediate classroom

as to provide highly situationally-specific information of questionable use in longitudinal studies. This view seems possible, given the relatively low correlations between popularity scores at Time One and Time Two to be discussed in the next section of this study.

Finally, the major link between children's real world experience and performance on tasks and measures of interest, namely their status as game experts, samplers or shunners was significant at Time One in the study and approached significance at Time Two in the analysis of variance performed for scores on the Ravens. These results suggest an ambiguous link between children's self reports of their free play activities with peers and their performances on tasks measuring cognitive processes, presumably underlying those performances. It may be that game status as a variable needs further specificity. For example, it is likely that being a game "expert" in hopscotch has far different connotations than being a game "expert" in football. Quite separate sets of skills and abilities are demanded by these other games which vary tremendously in their complexity.

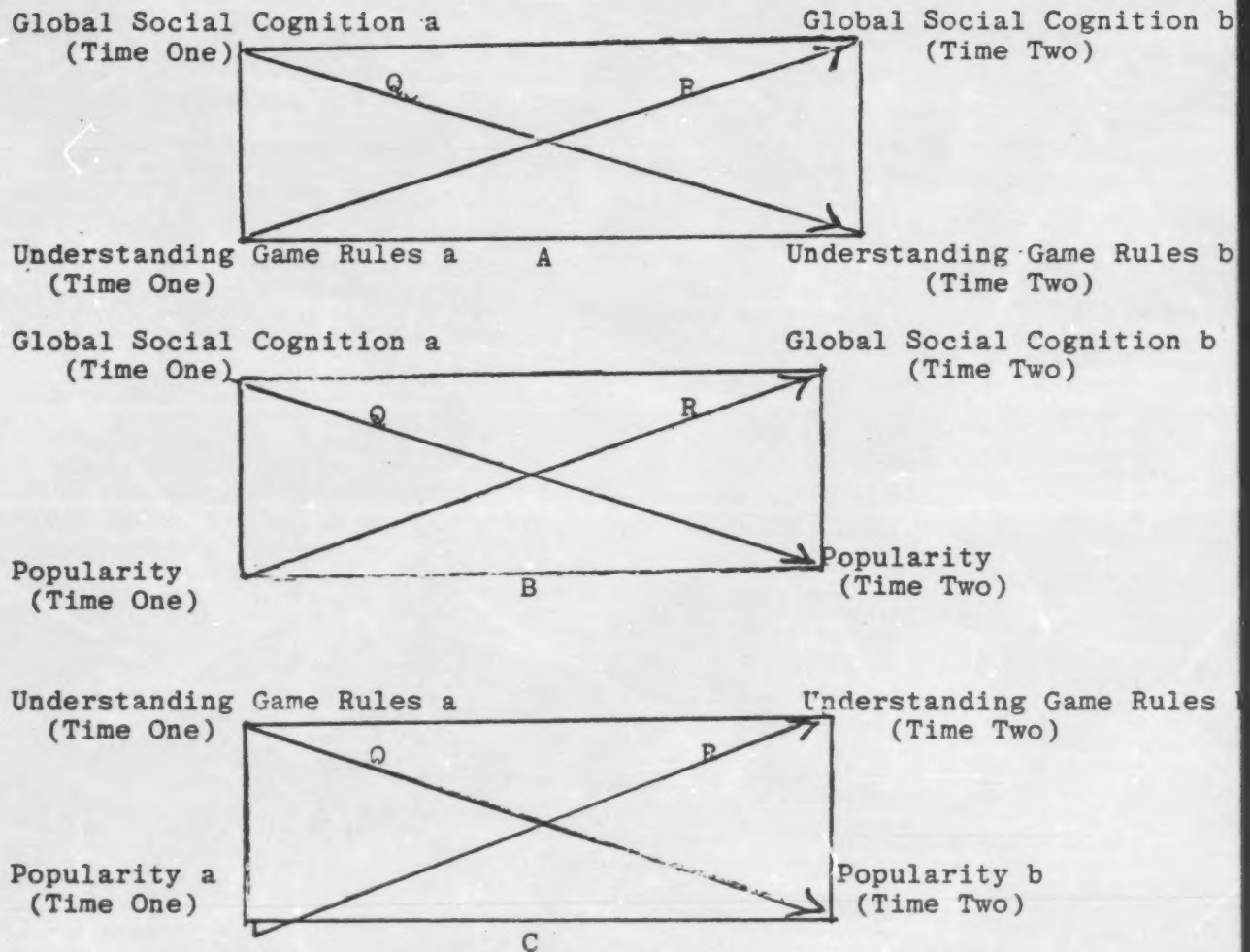
Longitudinal Analyses Over Time One and Time Two:

In order to determine the nature of the probable causal relation between children's popularity, skills in taking the perspective of others, making moral judgments and understanding game rules, two approaches were taken. First, a cross-lagged panel analysis was used to infer the causal pattern involving performance assessed on measures taken first at Time One and second at Time Two in the research. Next, two sets of multiple regression analyses were undertaken. The first was initiated to see how well a child's popularity, friendship ratings, understanding game rules, intellectual functioning and motor skill proficiency predicted his/her global social cognition ill. The second set of analyses was performed to explore the predictive value for understanding game rules of these same variables (with the obvious exception of understanding game rules).

Cross-Lagged Panel Analysis:

Because there is a general lack of evidence concerning longitudinal patterns of development for the major variables of interest, three models of causality were tested as presented in Figure 2-1. Each model makes a particular

FIGURE 2-1



assumption about causal directionality. Accordingly the question addressed by each model is as follows:

- Model A: From Time One to Time Two does Global Social Cognition influence Understanding Game Rules or does Understanding Game Rules have a stronger effect upon Global Social Cognition?
- Model B: From Time One to Time Two does Global Social Cognition influence popularity or does popularity have a stronger effect upon Global Social Cognition?
- Model C: From Time One to Time Two does Understanding Game Rules influence popularity or does popularity have a stronger effect upon Understanding Game Rules?

In each case, the inference of causal direction is based on a test of the significance between the cross-lagged correlations

(Q and R); if the correlations are significantly different from each other, the causal direction is inferred on the basis of the magnitude of the obtained correlations.

For each of the measures taken at Time One and Time Two including Understanding Game Rules, popularity and Global Social Cognition, the following pairs of correlations were computed: Synchronous correlations (r between the two scores at the same point in time), autocorrelations (r between the same measure at two points in time), and cross-lagged correlations (r between measure one at Time One and measure two at Time Two and r between measure one at Time Two and measure two at Time One). In all analyses including preliminary z-tests described below, computations were based upon partial correlations of the variables of interest controlling for effects of intellectual functioning (Ravens) and grade (age).

Preliminary z-tests of stationarity were calculated to test for differences in the synchronous correlations for each measure at Time One and Time Two. The critical values of $z = 1.96$, establishing a 95% confidence level, was used as the criterion for accepting a significant difference between a given pair of measures on which z-tests were computed. Results reported in Table 2-18 indicate that all calculated differences fell below the established value, thus, allowing the assumption of stationarity for measures used in these analysis and enabling further steps in the procedure to be taken.

Table 2-18

<u>Results of Z-Tests for Stationarity Measures</u>		<u>Z</u>
Global Social Cognition <u>vs.</u> Play Competence:		
	Time Two - Time One	.390
Global Social Cognition <u>vs.</u> Popularity:		
	Time Two - Time One	1.249
Play Competence <u>vs.</u> Popularity:	Time Two-Time One	.025

Results of the analyses of synchronous correlations computed for variables of interest at Time One and Time Two are presented in Tables 2-19 and 2-20. Although the coefficients of interest are represented above the diagonal, both zero-order (the diagram below) and partial correlations (above the diagonal) have been represented.

Table 2-19
Zero-Order and Partial Synchronous Correlations at Time One

	<u>Global Social Cognition a</u>	<u>Understanding Game Rules a</u>	<u>Popularity a</u>
Global Social Cognition a	.	.078	.069
Understanding Game Rules a	.266	.	.067
Popularity a	-.158	-.052	.

Table 2-20
Zero-Order and Partial Synchronous Correlations at Time Two

	<u>Global Social Cognition a</u>	<u>Understanding Game Rules a</u>	<u>Popularity a</u>
Global Social Cognition b	.	.137	.125
Understanding Game Rules b	.284	.	.071
Popularity b	.105	-.001	.

A second set of preliminary comparisons was made to test the relationship between scores on the Global Social Cognition and Understanding Game Rules measures at Time One and Time Two. In effect, a comparison of autocorrelations provides a reliability check of these measures. The correlation coefficients, computed with grade and Ravens scores partialled out, are presented in Table 2-21.

Table 2-21
Partial Correlations Between Scores on Dependent Measures at
Time One (a) and Time Two (b)

	<u>Global Social Cognition b</u>	<u>Understanding Game Rules b</u>	<u>Popularity b</u>
Global Social Cognition a	.38		
Understanding Game Rules a		.42	
Popularity a			.29

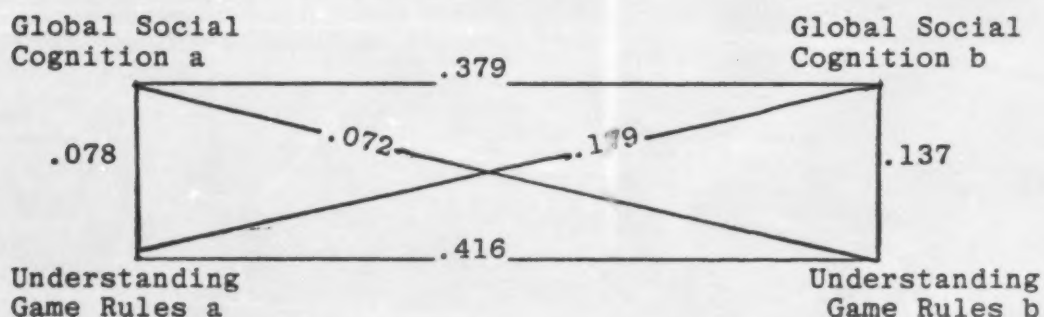
All correlational coefficients show positive, low to moderate levels of association indicating both fair reliability and stability across Time One and Time Two. The most heartening level of association (.42) is between performances at Time One and Time Two on Understanding Game Rules measures. Least heartening is the relationship (.29) between popularity at Time One and popularity at Time Two.

Once preliminary tests were complete, the cross-lagged panel analyses were initiated. The three models were each explored in turn.

Model A: Causal Relationship Between Global Social Cognition and Play Competence.

The first model to be tested for a causal relationship involved the variables Global Social Cognition and Understanding Game Rules at Time One and Time Two. Results presented in Figure 2-2 show the relevant synchronous, autonomous and cross-lagged correlations for these variables with grade and Ravens scores partialled from the equations.

FIGURE 2-2

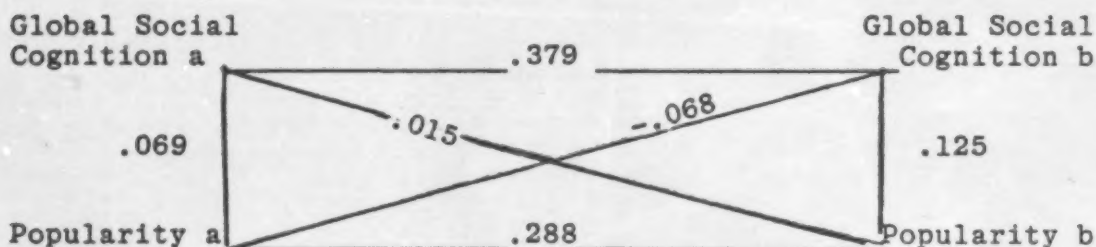


A z-test for differences between the two cross-lagged correlations produced a $z=.712$ indicating no significant differences between the cross-lagged correlations, thus allowing no inference to be made regarding directionality in this equation.

Model B: Causal Relationship Between Global Social Cognition and Popularity.

The second model to be tested for a causal relationship considered the variables of Global Social Cognition and popularity at the two time periods of interest in the research. The results of these correlations are presented in Figure 2-3 with grade and Ravens scores partialled from the equation.

FIGURE 2-3

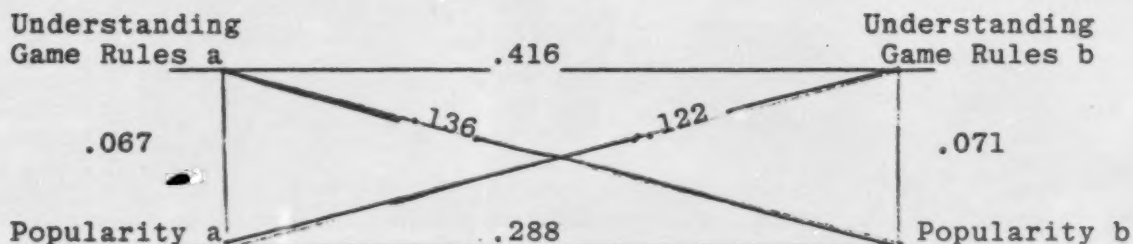


In the z-test of difference between the cross-lagged correlations presented in Figure 2-3, results indicate no significant differences ($z = -.0.330$). These results allow no conclusive statement to be made about directionality or cause.

Model C: Causal Relationship Between Understanding Game Rules and Popularity.

The last model to be tested for a causal relationship takes into account the causal structure of the relationship between Understanding Game Rules and popularity over Time One and Time Two. Figure 2-4 presents the set of relationships between these sets of measures.

FIGURE 2-4



When a test of differences was computed for the cross-lagged correlations of interest, a $z = -.092$ was obtained. Here as in the case of the two previously presented models, no generalizations can be formulated regarding these relationships.

Having found no pattern of relationships providing a model of statistically significant causal affects, it was decided that an alternate procedure should be attempted.

Regression Analyses:

Multiple linear regression allows computation of a more complex system of relationships than is possible in cross-lagged panel analysis. Cross-lagged panel analysis can take into account only two sets of variables, whereas a regression equation can be computed for "k" variables having a predictive relationship to a dependent variable. Two-variable models may be too simplistic to represent the actual system of relationships adequately. Thus, a set of step-wise multiple regressions were performed on the zero-order correlation matrices for the total sample and separately for each of the two grade levels.

In a step-wise regression equation, the variable entering the equation first is, in the present case, the task or measure accounting for the greatest portion of the variance in performance on either Understanding Game Rules or the Global Social Cognition measures. The first variable is followed by the task or measure accounting for the next largest amount of variance in the rated behavior in conjunction with the first task, and

so on. In connection with each equation, both the overall goodness of all measures entering the equation (percentage of the explained variance) and the significance of the information supplied by each measure entering the equation were considered in formulating the "best" regression equation in a procedure similar to one used by Kurdek (1978).

The first equation is based upon an analysis of measures of interest taken at both Time One and Time Two having predictive value for Understanding Game Rules as judged by children's performance on this measure in the second year of the study. This and subsequent equations are structured to include (1) the variables in the order in which they entered or dropped from the analysis; (2) the multiple r , (3) F -value and degrees of freedom and (4) level of significance.

- [(1) Understanding Game Rules b: $r=.58$, $F(1,59)=30.77$, $p<.01$.
 (2) Intellectual Functioning a (Ravens), $r=.64$, $F(2,58)=19.92$, $p<.01$;
 (3) Popularity a, $r=.65$, $F(3,57)=13.96$, $p<.01$;
 (4) Global Social Cognition a, $r=.66$, $F(4,56)=11.16$, $p<.01$;
 (5) Intellectual Functioning b (Ravens), $r=.68$, $F(5,55)=9.36$, $p<.01$;
 (6) Popularity b, $r=.68$, $F(6,54)=7.92$, $p<.01$;
 (7) Global Social Cognition b, $r=.69$, $F(7,53)=6.72$, $p<.01$].

In order to see how children's Global Social Cognition and Understanding Game Rules might be differentially predicted by varying developmental patterns for older and younger children in the study, regression equations were run separately for the two different age groups of subjects. In both sets of regressions, equations for the two variables were computed at Time One, Time Two, and longitudinally.

Equations at Time One and Time Two for grade 2/3 in Table 2-22 show that only Understanding Game Rules b is significantly predicted by children's task-related behaviors and popularity ratings.

Table 2-22
Regression Equations at Time One and Time Two for
Children in Grades 2/3

TIME ONE:

- A. Global Social Cognition a: [(1) Understanding Game Rules a, $r=.03$, $F(1,37)=0.03$, n.s.]. NOTE: Both intellectual functioning (Ravens a) and popularity a drop from the equation.
- B. Understanding Game Rules a: [(1) Intellectual functioning a (Ravens), $r=.10$, $F(1,37)=0.36$, n.s.; (2) Global Social Cognition a, $r=.10$, $F(2,36)=0.03$, n.s.]. NOTE: Popularity a drops from the equation.

TIME TWO:

- A. Global Social Cognition b: [(1) Understanding Game Rules b, $r=.34$, $F(1,29)=3.75$, n.s.; (2) Intellectual functioning b (Ravens), $r=.39$, $F(2,28)=2.25$, n.s.]. NOTE: Popularity b drops from the equation.
- B. Understanding Game Rules b: [(1) Global Social Cognition b, $r=.34$, $F(1,29)=3.75$, n.s.; (2) Popularity b, $r=.37$, $F(2,28)=2.21$, n.s.; (3) Intellectual functioning b (Ravens), $r=.37$, $F(3,27)=1.45$, n.s.].

For older children in grades 5/6, as displayed in Table 2-22, no equation was generated having a significant predictive relationship to either Global Social Cognition or Understanding Game Rules at either Time One or Time Two. The role of popularity in these equations is far more important than in the regressions for younger children; popularity dropped from three of the four equations calculated in those analyses. With older children, popularity is important in its negative relationship to Global Social Cognition and Understanding Game Rules.

Table 2-23

Regression Equations at Time One and Time Two
for Children in Grades 5/6

TIME ONE:

- A. Global Social Cognition a: [(1) Popularity a, $r=.30$, $F(1,30)=3.05$, n.s.; (2) Understanding Game Rules a, $r=.36$, $F(2,29)=2.20$, n.s.; (3) Intellectual Functioning a (Ravens), $r=.37$, $F(3,28)=1.49$, n.s.]. NOTE: Both intellectual functioning (Ravens a) and popularity drops from the equation.
- B. Understanding Game Rules a: [(1) Intellectual functioning a (Ravens), $r=.10$, $F(1,37)=0.36$, n.s.; (2) Global Social Cognition a, $r=.10$, $F(2,36)=0.03$, n.s.]. NOTE: Popularity a drops from the equation.

TIME TWO:

- A. Global Social Cognition b: [(1) Understanding Game Rules b, $r=.34$, $F(1,29)=3.75$, n.s.; (2) Intellectual functioning b (Ravens), $r=.39$, $F(2,28)=2.55$, n.s.]. NOTE: Popularity b drops from the equation.
- B. Understanding Game Rules b: [(1) Global Social Cognition b, $r=.34$, $F(1,29)=3.75$, n.s.; (2) Popularity b, $r=.37$, $F(2,28)=2.21$, n.s.; (3) Intellectual functioning b (Ravens), $r=.37$, $F(3,27)=1.45$, n.s.].

A final set of regression analyses were performed to assess the predictive relationship between children's performance on all measures and tasks in addition to their popularity ratings at Time One and Time Two. Again, these equations were run separately by grade. Results are presented in Tables 2-24 and 2-25. These results indicate a sizeable portion of the variance accounted for by variables of interest in each case: 60% of the variance in the equation for 2/3 grade data and 67% of the variance for 5/6 grade data. The negative relationship between both popularity measures, the friendship ratings and Understanding Game Rules b persists for older children whose Ravens scores at Time One are also negatively related to Understanding Games Rules b.

Table 2-24

Regression Equation for Understanding Game Rules
at Time Two (All Variables) for Children in Grades 2/3

Understanding Game Rules b: [(1) Understanding Game Rules a, $t=.43$, $F(1,28)=6.37$, $p<0.05$; (2) Popularity a, $r=.57$, $F(2,27)=6.37$, $p<0.01$; (3) Intellectual functioning a (Ravens), $r=.60$, $F(3,26)=4.95$, $p<0.01$; (4) Friendship rating, $r=.68$, $F(4,25)=5.29$, $p<0.01$; (5) Global Social Cognition a, $r=.68$, $F(5,24)=4.07$, $p<0.01$; (6) Global Social Cognition b, $r=.72$, $F(6,23)=4.03$, $p<0.01$; (7) Intellectual functioning b (Ravens), $t=.75$, $F(7,22)=3.99$, $p<0.01$; (8) Motor Skill Proficiency (Bruininks), $r=.77$, $F(8,21)=3.84$, $p<0.01$]. NOTE: Popularity b drops from the equation.

Table 2-25

Regression Equation for Understanding Game Rules at
Time Two (All Variables) for Children in Grades 5/6

Understanding Game Rules b: [(1) Understanding Game Rules a, $r=.57$, $F(1,23)=10.98$, $p<0.01$; (2) Popularity a, $r=.61$, $F(2,22)=6.74$, $p<0.01$; (3) Intellectual functioning a (Ravens), $r=.62$, $F(3,21)=4.43$, $p<0.025$; (4) Global Social Cognition a, $r=.63$, $F(4,20)=3.25$, $p<0.025$; (5) Intellectual functioning b (Ravens), $r=.75$, $F(5,19)=4.75$, $p<0.01$; (6) Popularity b, $r=.77$, $F(6,18)=4.42$, $p<0.01$; (7) Motor Skill Proficiency (Bruininks), $r=.80$, $F(7,17)=4.22$, $p<0.01$; (8) Friendship rating, $r=.80$, $F(8,16)=3.58$, $p<0.025$; (9) Global Social Cognition b, $r=.80$, $F(9,15)=3.06$, $p<0.025$].

DISCUSSION

Two sets of longitudinal analyses were carried out in order to investigate relationships over time among major variables in the study. First, the three models of causality used in the cross-lagged panel analyses were discovered to not include any very promising outlines for an understanding of the directionality of variables considered theoretically important in social development, i.e., popularity, capacity both to reason about ethical dilemmas and to take the role of another, and the capacity to reason about social conventions. Coefficients were extremely low, ranging from a low negative path coefficient for popularity at Time One and Global Social Cognition at Time Two ($-.068$) to a coefficient of $.179$ for Understanding Game Rules at Time One and Global Social Cognition at Time Two. The sad reality of a cross-lagged panel framework is that it cannot accommodate more than two sets of variables in a given analysis. Researchers investigating complex constructs such as children's social development are better advised to use regression analysis to test their findings.

Regression equations generated from larger chunks of the data were, in part, more revealing. The most provocative regression equations are probably those reported in Tables 2-24 and 2-25. These tables are for equations calculated for Understanding Game Rules at Time Two separately for the two grade (age) groups. The question asked in both these analyses is what in the full complement of tasks and measures best predicts performance in making decisions about social conventions (Understanding Game Rules)? In other words, these equations consider the child's deliberations about game rules and game performance as a function of earlier performance on a similar measure along with performances on related tasks (measured at Time Two intervals).

The patterns are quite similar for both groups of children. In the case of each age group, skills exhibited during the first year best predict performance in the second year. Indeed, the initial performance on the Understanding Game Rules task is the first variable to enter the equation for both age groups.

These data argue for an interpretation of social development as both cumulative and directly related to earlier, comparable experiences. Consider the very different conclusions we would have had to put forward had, for example, popularity ratings received during the second year of the study bears the best predictor of Understanding Game Rules at Time Two. The actual findings verify a sequential, stage-like progression of development informed by the child's experience in the real world. Common sense dictates that practice makes perfect. Skill at Time One in reasoning about game rules should predict skill in the same domain at Time Two as in fact it does. However, although a similar pattern for both age groups of relationships seems

clear in these equations and although we can argue for a cumulative formulation of development within this scheme, Study Two results still leave largely unanswered questions about the process itself of social development. We know that later understanding of game rules is related to a child's earlier understanding of game rules but we do not know what this relationship may look like in the day-to-day interactions children have in the context of their games. Study Three is designed to explore interactions in children's spontaneously organized playground games in order to examine this process.

APPENDIX I

Social Cognitive Tasks and Measures in the Study:

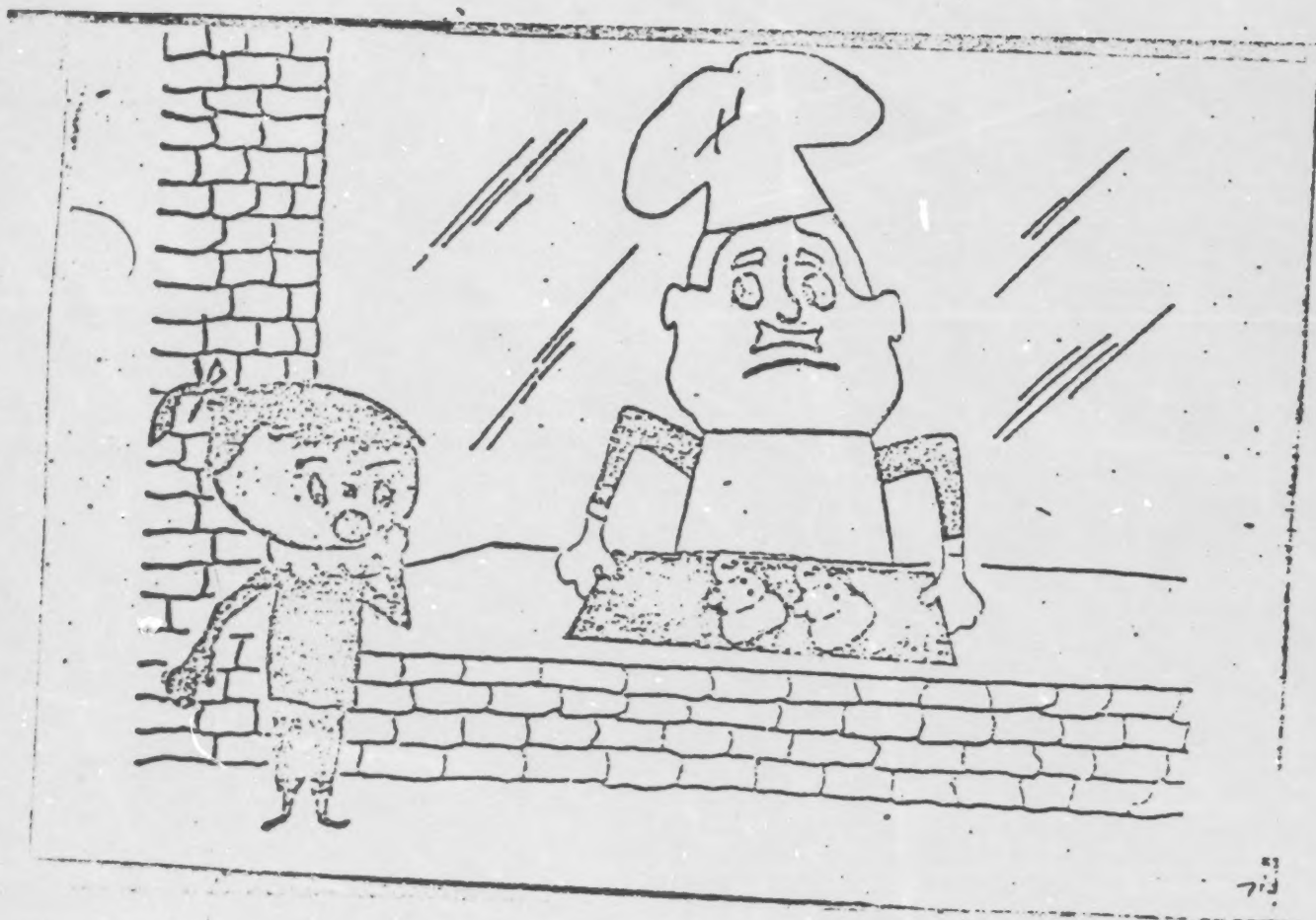
Each task or measure examining one or another dimension of social reasoning in Study Two i.e., (Chandler's Bystander Cartoons, Selmsn's "First Things," and video taped game sequences) demands that the child provide carefully probed, reflective responses to an interpersonal dilemma or social task. The important similarity underlying all tasks is the primary demand to sort through and coordinate sometimes seemingly contradictory pieces of information presented in a visual display. Thus, both conceptual and cognitive processes are involved in the performance of each task.

The strength of the established (Chandler and Selman) social cognitive measures used in Study Two rests in their capacity to force the child to solve a real world problem. The great weakness of these measures is a general lack of verisimilitude in presenting the "real world" to the child. Three different techniques are associated with the three measures used. The Chandler Cartoon Sequence, used to assess perspective taking skills, employs line drawings of cartoon figures as in Figure 1. Although the child in a task situation provides an account of the events portrayed and is given an explanation of the emotional content of ambiguous cartoon frames by the experimenter, it is hardly reassuring that children frequently as with the frame in Figure 1 require the information that the baker is surprised at the girl's tears and is not unhappy about or angered by the scarcity of cookies on the tray. The Chandler measure is without doubt the most ambiguous of the three tasks.

Still photographs and especially films on video tapes provide far less ambiguous information to the child who can rely upon paralinguistic cues, such as facial expressions or gestures, language itself (with a sound track), the configuration of social groups, etc., to provide important contextual information in a manner that importantly reflects the real world. The Selman measure utilizes a sound track and still photographs in a slide/tape format. Children are presented with relatively unambiguous cues, i.e., facial features are distinctively human and groupings of children reflect and reinforce the narrative. Finally, the dialogue itself, rather than the experimenter or child, provides an account of the action. The video tape format, designed by researchers in the current project to assess Understanding of Game Rules, uses live action to portray games of hopscotch and freeze tag (for Time One) and hopscotch and kickball (for Time Two). The simulating the rapidly-paced world of playground life and is asked to respond to enacted performances by identifying rule violations (cheating) and mistakes (accidents) and also describing motives or actions leading to errors. This seems to present information the most "realistic" of any of the three formats.

The external validity of standard measures used to assess social cognition has been challenged most directly by Rubin and Peplar (1980) who argue that the best laboratory for the study of social cognitive skills is children's naturalistic play. It may be that the measures used here, and even the video tape, closest to live action of the three, are not assessing perspective taking, the capacity to coordinate different viewpoints in an interpersonal dilemma or an understanding of game rules. Rather, as Cooney and Selman (1978) have suggested, these tasks instead may either tap some dimension of these skills (i.e., reflective reasoning) or perhaps more pessimistically, to paraphrase Bronfenbrenner (1979), may merely measure the child's capacity to provide responses to strange stimuli in a strange context with a stranger.

Despite the problems inherent in the use of these measures, the experiment undertaken here is important in light of the general lack of longitudinal data in the study of children's social cognition. Researchers have been unable to define a system of relationships or causality or to describe with any precision developmental differences in acquisition of social skills. Thus, although the researchers were skeptical about the validity of the final results, Study Two was undertaken to provide systematically gathered data using standard, though suspect, measures.



APPENDIX II

Preliminary Analyses

Attrition Bias:

Several preliminary tests were made to determine the existence of attrition bias resulting from changes in the subject pool from Time One (1978-79) to Time Two (1979-80) in the research.

In a series of chi-square analyses, data for subjects present at both times were compared with data for subjects present at either Time One or Time Two, but not at both times. First, analyses were carried out on all subjects for whom information was present at Time One (N=97) and second, analyses were made of those for whom data were present at Time Two (N=114). Analyses in both sets of comparisons were made for the two groups along the major independent variables: grade, sex, school and game status. Table 2-1 presents comparisons of complete subject sets with those who were added at Time One while Table 2-2 presents comparisons with subjects present at Time Two.

Results indicate no significant differences for any of the comparisons calculated in these analyses. Having determined that no attrition bias was present in the data, the decision was made to use both complete and incomplete data files for single time (either Time One or Time Two) analyses.

Global Social Cognitive Measures:

Next, a set of analyses were performed to determine if individual measures could be combined to form global measures. Recent evidence (Walker, 1980), suggests a strong correspondence between social perspective taking and skills in making moral judgments. Therefore, the decision was made to combine scores received by subjects on the two established measures (Chandler's Cartoon Sequences and Selman's First Things). Because no significant sex differences were found on scores received on either measure, results for boys and girls were combined. However, since developmental trends were apparent, data were analyzed separately by grade. Mean scores attained at Time One and Time Two on combined subtests of the Chandler Cartoon Sequences (sandcastle and bakery) and the Selman "First Things" measure are reported separately by grade and school in Tables 2-3a, 2-3b, 2-4a, and 2-4b.

Next, a set of intercorrelations were computed to measure the internal consistency of the two social cognitive measures. Subtests of each measure at Time One and Time Two were correlated and the coefficient alphas for the four subtests were also determined as reliability estimates. The results of these analyses are presented in Table 2-5. These results indicate generally low to moderate correlations between subtests from different measures. Most encouraging are reliability estimates for both Time One and Time Two across

all four subtests. As a second step in this procedure, a correlation matrix was computed to permit analysis of combined and composite scores at Times One and Two. In this analysis, correlations were made between scores for each of the two combined measures (Chandler Cartoon Sequences, sandcastle and bakery; First Things) and composite scores (Chandler Cartoon Sequences and First Things combined at Time One and Time Two). Results of this analysis are presented in Table 2-6.

Results indicate generally high correlations between combined and composite scores at both Time One and Time Two.

The encouraging results obtained in these analyses allowed construction of a Global Social Cognitive measure attained from scores on all subtests of the Chandler Cartoon Sequences and First Things at Time One and at Time Two. The two Global Social Cognitive measures were used as variables in later analyses.

Understanding Major Game Rules:

An overall measure of children's skills in recognizing and analyzing rule violations was obtained by combining individual scores on video taped presentations of hopscotch and freeze tag (Time One) and hopscotch and kickball (Time Two). First, mean scores were calculated for these measures. Median scores at Time One and Time Two are presented in Table 2-7 with scores combined for the two subtests at each time interval. Means are calculated separately for girls and boys at the two grade levels in each of three schools. Next, correlations between scores on the subtests at each time were computed. Results indicate that children's performances on one subtest were matched by their performances on the other (Time One, Pearson $r=.30$, $p<.01$; Time Two, Pearson $r=.45$, $p<.0001$).

Popularity Index:

Each child's nominations as most favored (first choice) school workmate and play partner (from a possible rating as first, second, or third choice in each category) were combined to form a popularity index for each child at Time One and Time Two. Correlations at both Time One (Pearson $r=.43$, $p<.0001$) and at Time Two (Pearson $r=.52$, $p<.0001$) indicate that children rated as a first choice in one category were also rated highly in the other.

Teacher Ratings:

During Time Two teacher's ratings of children's school performance and social skills were obtained separately. Correlation of these two ratings (Pearson $r=.66$, $p<.0001$) indicate that teachers tend to rate students similarly along both dimensions. In Time Two analyses, teacher ratings of both aspects of children's functioning are combined and treated as a single variable.

Table 2-1

Subjects Present at Time One and Time Two Compared with Subjects Present at Time One Only Along Variables of Game Status, Grade, Sex, and School

Subject Groups	Game Status			Grade		Sex		School		
	Expert	Sampler	Shunner	2/3	5/6	Male	Female	Covedale,	Hoop,	Oyler
Time One/Time Two	26	24	23	39	35	37	39	29	22	23
Time One Only	7	7	7	11	12	12	11	5	13	5
Total	33	31	30	50	47	49	48	34	35	28
%	35.1	33.0	31.9	51.5	48.5	50.5	49.5	35.1	36.1	28.9

Table 2-2

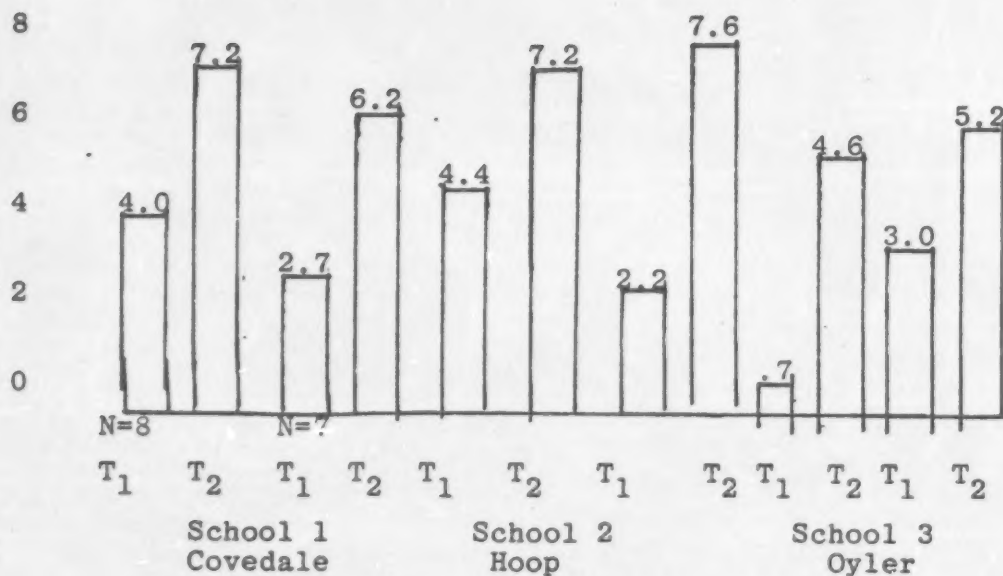
Subjects Present at Time One and Time Two Compared with Subjects Present
at Time Two Only Along Variables of Game Status, Grade, Sex, and School

<u>Subject Groups</u>	<u>Game Status*</u>			<u>Grade</u>		<u>Sex</u>		<u>School</u>		
	<u>Expert</u>	<u>Sampler</u>	<u>Shunner</u>	<u>2/3</u>	<u>5/6</u>	<u>Male</u>	<u>Female</u>	<u>Covedale,</u>	<u>Hoop,</u>	<u>Oyler</u>
Time One/Time Two	35	24	11	39	35	37	37	29	22	23
Time Two Only	12	15	11	18	22	20	20	14	15	11
Total	47	39	22	57	57	57	57	43	37	34
%	41.2	34.2	19.3	50.0	50.0	50.0	50.0	37.7	32.5	29.8

*Excludes six individuals whose game status could not be determined using established criteria and who were accorded no game status.

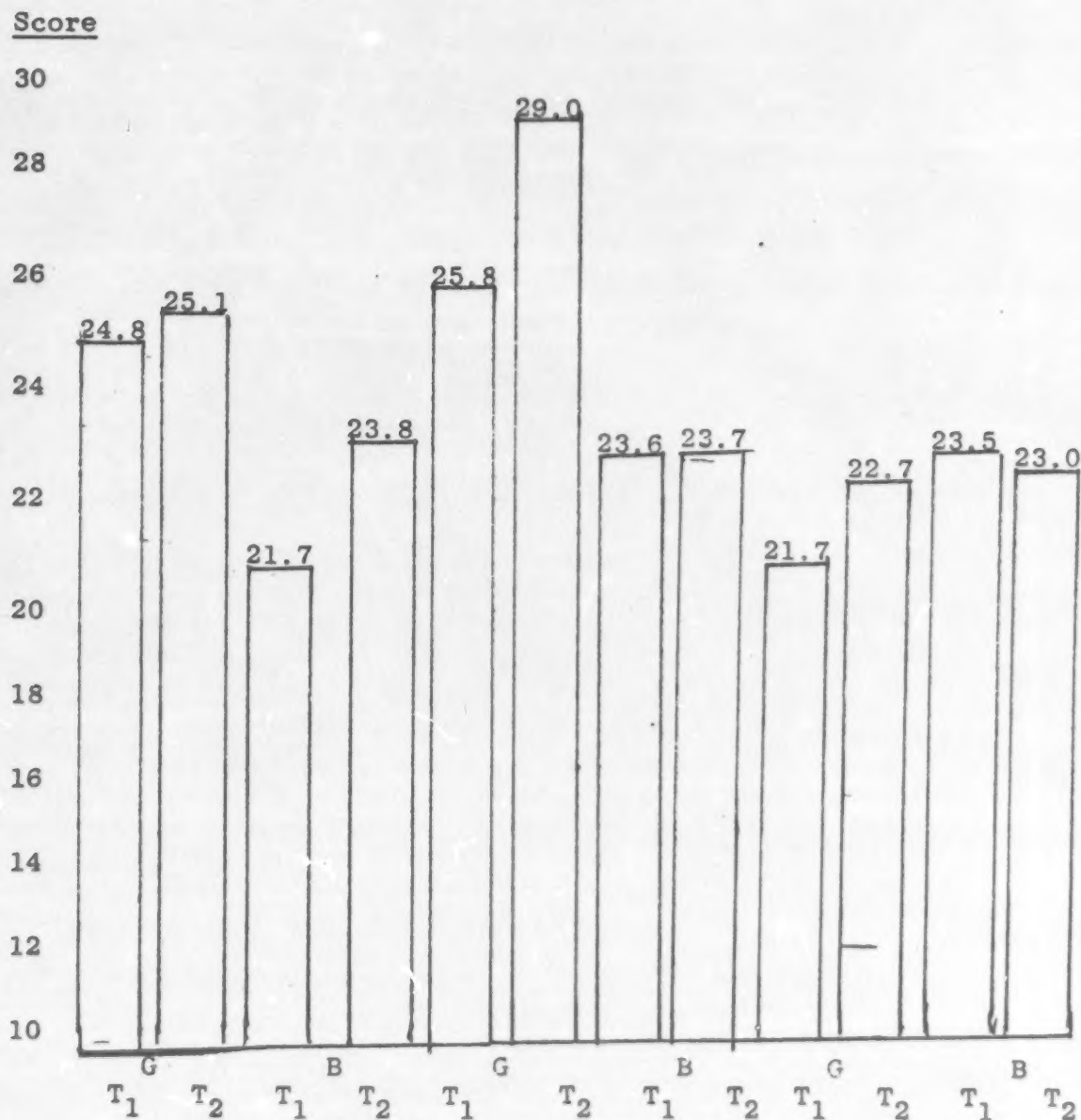
Table 2-3a

Chandler: (Sandcastle and Bakery)
Grade 2/3

Score

Mean scores for combined Chandler Cartoon Sequences (Sandcastle and Bakery) at Time One and Time Two for boys and girls in Grades 2 and 3 at Covedale, Hoop, and Oyler Schools.

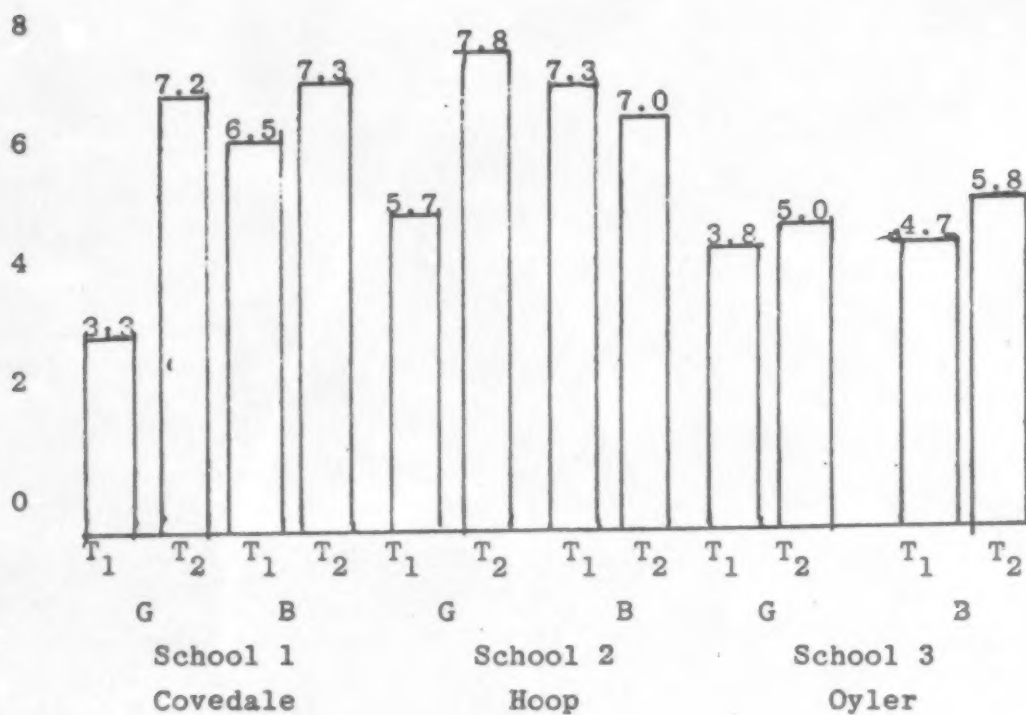
Table 2-3b
Selman's First Things" (A and B)
Grade 2/3



Mean scores for combined "First Things" Dilemmas at Time One and Time Two for Boys and Girls in Grades 2 and 3 at Covedale, Hoop, and Oyler Schools.

Table 2-4a

Chandler: (Sandcastle and Bakery)
Grade 5/6

Score

Mean scores for combined Chandler Cartoon Sequences (Sandcastle and Bakery) at Time One and Time Two for boys and girls in Grades 5 and 6 at Covedale, Hoop, and Oyler Schools.

Table 2-4b

Selman's First Things: (A and B)
Grade 5/6

Score

30

28

26

24

22

20

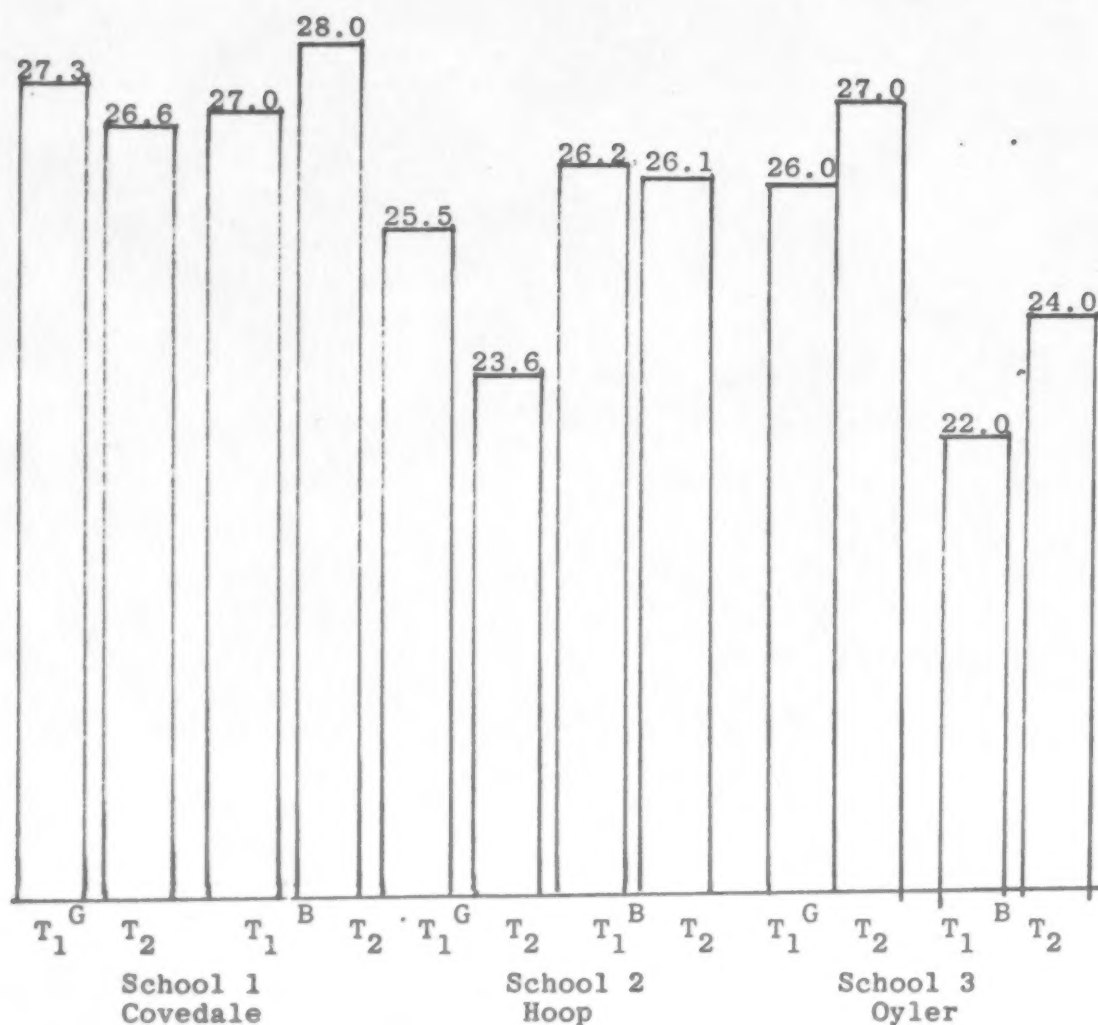
18

16

14

12

10



Mean score for combined "First Things" Dilemmas at Time One and Time Two for boys and girls in Grades 5 and 6 at Covedale, Hoop, and Oyler Schools.

Table 2-5

Intercorrelations and Reliability Estimates for Subtests of the Chandler Cartoon Sequence (Sandcastle & Bakery) and Subtests of "First Things" (A & B) at Time One and Time Two

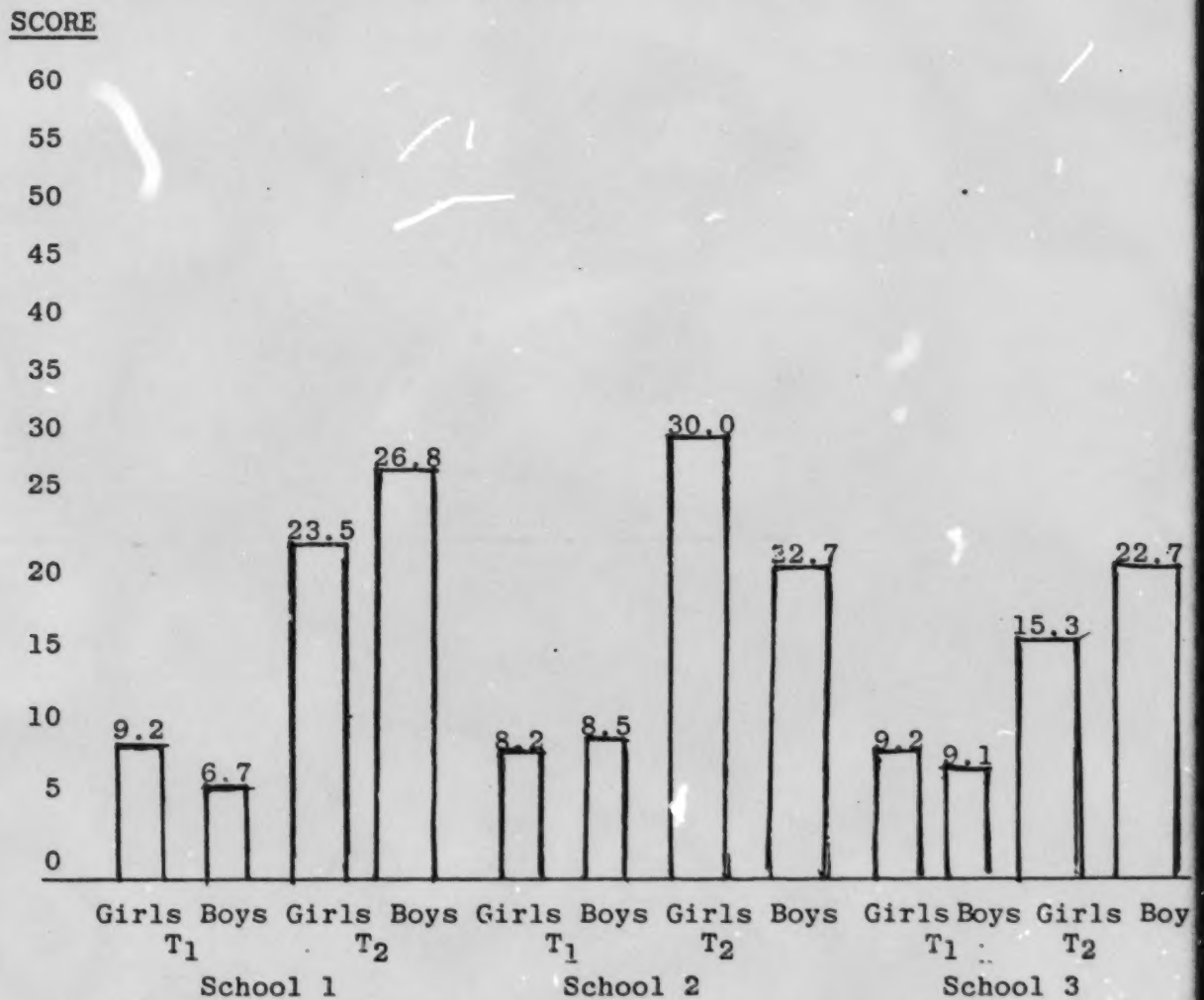
<u>Subtests</u>	TIME ONE				TIME TWO			
	Sandcastle	Bakery	First Things (A)	First Things (B)	Sandcastle	Bakery	First Things (A)	First Things (B)
Sandcastle		.75	.31	.15		.38	.19	.31
Bakery			.33	.12			.05	.12
"First Things" (A)				.29				.48
Co-efficient Alpha	.55				.54			

Table 2-6
Correlations for Combined and Composite Scores for the
Chandler Cartoon Sequences and "First Things" at Time
One and Time Two

Composite Score	Combined Score Chandler Cartoon Sequences (Time 1)	Chandler Cartoon Sequences (Time 2)	"First Things" (Time 1)	"First Things" (Time 2)
Global Social Cognitive Measure (Time 1)	.63	.62	.69	.73
Global Social Cognitive Measure (Time 2)	.62	.40	.60	.71

Mean Scores for Combined Playground Video
Taped Performances at Time One and Time Two
for Boys and Girls in Grades 2/3 at Covedale,
Hoop and Oyler Schools.

Table 2-7a



Mean Scores for Combined Playground Video
Taped Performances at Time One and Time
Two for Boys and Girls in Grades 5/6 at
Covedale, Hoop, and Oyler Schools

Table 2-7b

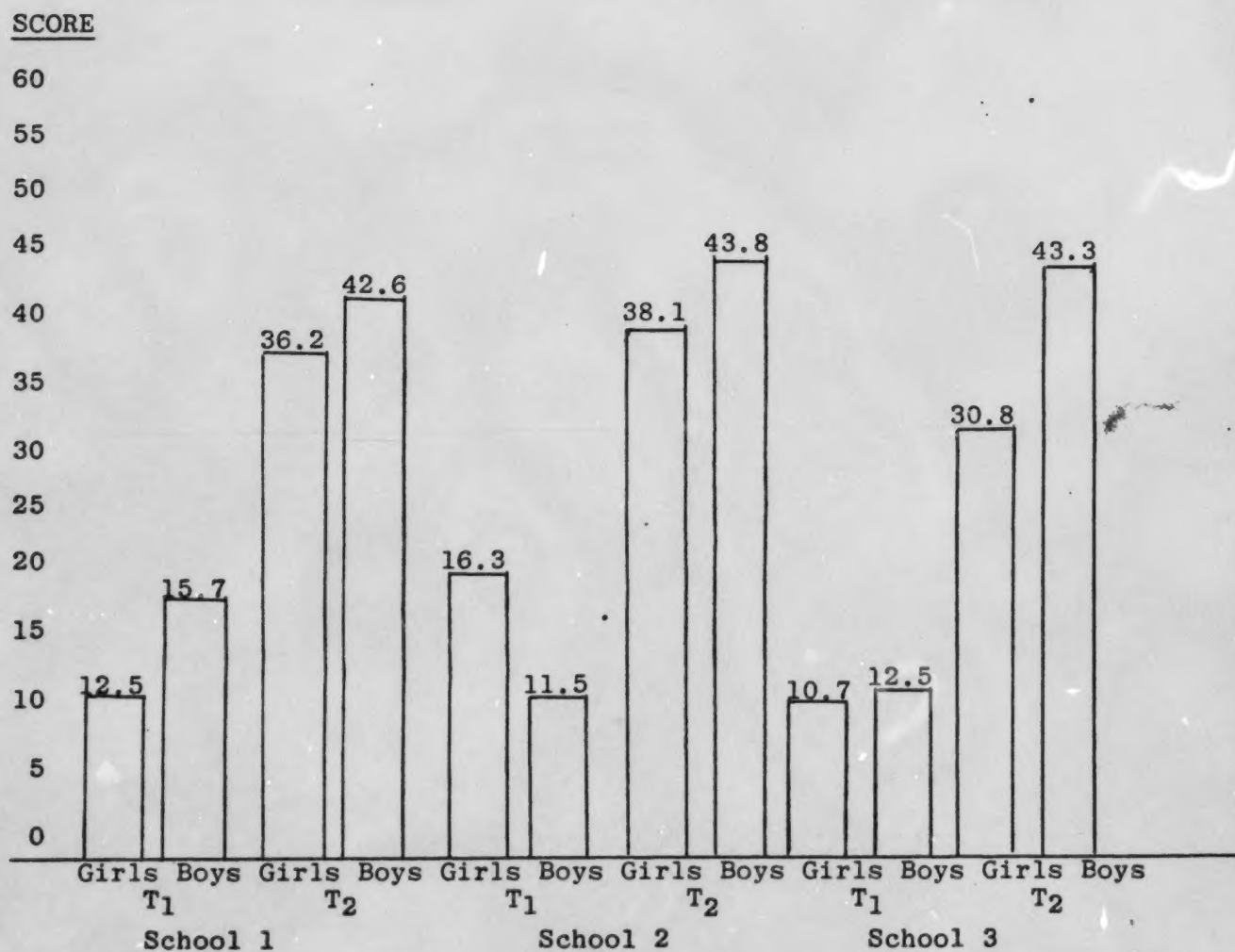


Table 2-8a
(Time 1)

Zero-Order Correlations for Major Measures

	<u>Understanding Game Rules</u>	<u>Popularity</u>	<u>Intellectual Functioning Ravens</u>
Global Social Cognition	.27*	-.12	.10
Understanding Game Rules		.05	.24*
Popularity			.17

*p < .05

Table 2-9a

(Time 1)

Partial Correlations (Controlling for
Grade) for Major Measures

	<u>Global Social Cognition</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>
Global Social Cognition			-.06
Understanding Game Rules		.06	
Popularity		.05	

Table 2-10a
(Time 1)

Partial Correlations (Controlling for
Ravens) for Major Measures

	<u>Global Social Cognition</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>
Global Social Cognitiona		.19*	
Understanding Game Rules			-.11
Popularity			-.02

Table 2-11a
(Time 1)

Partial Correlations (Controlling for Grade
And Ravens) for Major Measures, Time 1

	<u>Global Social Cognition</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>
Global Social Cognition			-.06
Understanding Game Rules		.06	
Popularity			.08

Table 2-12a
(Time 1)

Analysis of Variance for Children's
Global Social Cognition

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	27.66	1	27.66	7.29	.01
Sex	12.40	1	12.40	3.27	.07
Game Status	1.83	2	.91	.24	.78
<u>2-Way Interactions</u>					
Game x Sex	.22	1	.22	.06	.81
Grade x Game Status	22.06	2	11.03	2.91	.06
Sex x Game Status	13.99	2	6.99	1.84	.16
<u>3-Way Interactions</u>					
Grade x Sex x Game Status	7.47	2	3.74	.98	.38

NOTE: 4-Way Interactions with Grade, Sex, Game Status and School is not significant.

Table 2-13a
(Time 1)

Analysis of Variance for Children's
Understanding Game Rules

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	650.38	1	650.38	24.91	.00
Sex	12.28	1	12.28	.47	.49
Game Status	142.22	2	71.11	2.72	.07
<u>2-Way Interactions</u>					
Grade x Sex	92.60	1	92.60	3.55	.06
Grade x Game Status	5.46	2	2.73	.11	.90
Sex x Game Status	178.51	2	89.25	3.42	.03
<u>3-Way Interactions</u>					
Grade x Sex x Game Status	168.09	2	84.05	3.22	.04

Table 2-14a
(Time 1)

Analysis of Variance for Children's Popularity

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	1.22	1	1.22	1.64	.20
Sex	1.22	1	1.22	1.64	.20
Game Status	.910	2	.46	.61	.55
<u>2-Way Interactions</u>					
Grade x Sex	.12	1	.12	.16	.69
Grade x Game Status	.96	2	.48	.64	.53
Sex x Game Status	.03	2	.01	.02	.98
<u>3-Way Interactions</u>					
Grade x Sex x Game Status	1.48	2	.74	.99	.38

Table 2-15a
(Time 1)

Analysis of Variance for Children's
Intellectual Functioning (Raven's
Coloured Progressive Matrices)

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	411.05	1	411.05	22.93	.001
Sex	64.79	1	64.79	3.62	.06
Status	9.98	2	4.99	.28	.76
<u>2-Way Interactions</u>					
Grade x Sex	44.97	1	44.97	2.51	.12
Grade x Status	195.63	2	97.81	5.46	.05
<u>3-Way Interactions</u>					
Grade x Sex x Status	6.35	2	3.18	.18	.84

Table 2-8b
(Time 2)Zero-Order Correlations of Children's Scores on Major Measures

<u>Global Social Cognition</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>	<u>Teacher Ratings</u>	<u>Bruininks Oseretsky</u>	<u>Friendship Rating</u>	<u>Ravens b</u>
Global Social Cognition b	.14	.22*	.14	.19	-.05	.14
Understanding Game Rules b		.01	.11	.35**	.08	.47***
Popularity			.07	.07	.12	.03
Teacher Ratings				.32**	.32**	.48***
Bruininks- Oseretsky					.25**	.34**
Friendship Ratings						.10
Ravens b						

Table 2-9b
(Time 2)Partial Correlations (Controlling for Grade) of Children's
Scores on Major Measures

	<u>Global Social Cognition b</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>	<u>Teacher Ratings</u>	<u>Bruininks- Oseretsky</u>	<u>Friendship Ratings</u>	<u>Intellectual Functioning (Ravens)</u>
Global Social Cognition		.18	.21	.14	.11	.05	.14
Understanding Game Rules			.10	.17	.30***	.08	.47***
Popularity b				.03	.06	.32**	.03
Trate					.33**	.32**	.48***
Bruininks-Oseretsky						.25**	.34**
Friendship Ratings							.10

* $p < .05$ ** $p < .02$ *** $p < .001$

TABLE 10b (Time 2)
Partial Correlations (Controlling for Ravens a) of Children's
Scores on Dependent Measure

	Global Social Cognition	Play Competence	Popularity	Teacher Ratings	Bruininks Oseretsky	Friendship Rating	Ravens
Global Social Cognition		.13	.20	.06			.01
Play Competence			.03	-.01	.23*	.13	.46***
Popularity				-.06	.07	.06	.04
Teacher Ratings					.22*	.36**	.43***
Bruininks Oseretsky						.30**	.16
Friendship Ratings							.20*

2-54

Table 2-10b
(Time 2)

Parial Correlations (Controlling for Ravens a)
of Children's Scores on Major Measures

	<u>Global Social Cognition</u>	<u>Understanding Game Rules</u>	<u>Popularity</u>	<u>Teacher Ratings</u>	<u>Bruininks Oseretsky</u>	<u>Friendship Ratings</u>	<u>Ravens</u>
Global Social Cognition	.	.13	.20	.06			.01
Understanding Game Rules			.03	-.01	.23*	.13	.46***
Popularity				-.06	.07	.06	.04
Teacher Rating					.22*	.36**	.43***
Bruininks Oseretsky						.30**	.16
Friendship Ratings							.20*

Table 2-11b

(Time 2)

Partial Correlations (Controlling for Ravens a and
Grade) of Children's Scores on Major Measures

	<u>Global Social Cognition b</u>	<u>Understanding Game Rules</u>	<u>Popularity b</u>	<u>Teacher Ratings</u>	<u>Bruininks Oseretsky</u>	<u>Friendship Ratings</u>	<u>Ravens a</u>
Global Social Cognition b		.14	.20	.07	.06	.08	.00
Understanding Game Rules b			.09	.07	.25	.08	.40
Popularity b				.07	.08	.06	.07
Teacher Ratings					.24	.36**	.51**
Bruininks Oseretsky						.31**	.15
Friendship Ratings							.25*

Table 2-12b
(Time 2)

Analysis of Variance for Children's Global
Social Cognition

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	184.515	6	184.51	8.19	.01
Sex	4.148	1	4.14	0.18	.67
Status b	80.637	2	40.31	1.79	.18
School	330.044	2	165.02	7.32	.00
<u>2-Way Interactions</u>					
Grade x Sex	24.3	1	24.80	1.08	.31
Grade x Status b	12.6	2	6.31	.28	.78
Sex x Status b	77.1	2	38.53	1.71	.19
Grade x School	167.9	2	83.93	3.72	.03
<u>3-Way Interactions</u>					
Grade x Sex x Status b	27.98	2	13.99	1.65	.02

Table 2-13b

(Time 2)

Analysis of Variance for Children's Understanding
Game Rules

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	2646.78	1	2646.78	20.70	.00
Sex	576.62	1	576.62	4.51	.04
Status b	191.24	2	95.62	0.75	.48
School	1068.92	2	534.46	4.18	.02
<u>2-Way Interactions</u>					
Grade x Sex	34.16	1	34.16	.27	.60
Grade x Status b	4.61	2	2.30	.02	.98
Sex x Status b	1.23	2	.62	.01	.99
Grade x School	23.93	2	11.96	.09	.91

Table 2-14b
(Time 2)

Analysis of Variance for Children's Popularity b

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>	2.086	6	0.348	0.390	0.881
Grade	0.499	1	0.499	0.560	0.459
Sex	0.000	1	0.000	0.000	0.992
Status	0.292	2	0.146	0.164	0.850
School	1.158	2	0.579	0.650	0.528
<u>2-Way Interactions</u>	12.071	13	0.929	1.042	0.435
Grade x Sex	1.011	1	1.011	1.134	0.294
Grade x Status	0.925	2	0.463	0.519	0.599
Grade x School	1.485	2	0.792	0.889	0.420
Sex x Status	2.654	2	1.327	1.489	0.238
Sex x School	0.171	2	0.086	0.096	0.909
Status x School	3.961	4	0.990	1.111	0.365

Table 2-15b
(Time 2)

Analysis of Variance for Children's Ravens b

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>	594.293	6	99.049	10.697	0.000
Grade	363.505	1	363.505	39.256	0.000
Sex	0.709	1	0.709	0.077	0.784
Status	1.013	2	0.506	0.055	0.947
School	97.939	2	48.969	5.288	0.009
<u>2-Way Interactions</u>	306.928	13	23.610	2.550	0.012
Grade x Sex	131.157	1	131.157	14.164	0.001
Grade x Status	55.983	2	27.991	3.023	0.060
Grade x School	2.602	2	1.301	0.141	0.869
Sex x Status	30.582	2	15.291	1.651	0.205
Sex x School	38.796	2	19.398	2.095	0.137
Status x School	87.725	4	21.931	2.368	0.070

Table 15b (Time 2)

Analysis of Variance for Children's Ravens_b

<u>Source of Variation</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
<u>Main Effects</u>					
Grade	313.51	1	313.51	39.21	.00
Sex	.71	1	.71	.07	.78
Status	1.01	2	.51	.06	.95
School	97.94	2	48.97	5.29	.01
<u>2-Way Interactions</u>					
Grade x Sex	131.16	1	131.16	14.16	.00
Grade x Status	55.98	2	27.99	3.02	.06
Sex x Status	30.58	2	15.29	1.65	.20
Grade x School	2.60	2	1.30	.14	.87

Table 2-16
Analysis of Variance for Children's
Bruininks-Oseretsky

Source of Variation	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	778.66	1	778.66	5.84	.02
Sex	776.67	1	776.67	5.83	.02
Status 2	211.59	2	105.79	.79	.46
<u>2-Way Interactions</u>					
Grade x Sex	759.32	1	759.32	5.69	.02
Grade x Status 2	132.26	2	66.13	.49	.61
Sex x Status 2	279.05	2	139.53	1.05	.36
<u>3-Way Interactions</u>					
Grade x Sex x Status 2	122.67	2	61.33	.46	.63

Table 2-17

Analysis of Variance For Children's
Ratings by Teachers

Source of Variance	SS	df	MS	F	P
<u>Main Effects</u>					
Grade	1.15	1	1.15	.26	.61
Sex	.82	1	.82	.19	.66
Status	.49	2	.25	.06	.94
<u>2-Way Interactions</u>					
Grade x Sex	25.19	1	25.19	5.85	.02
Grade x Status	7.69	2	3.85	.89	.42
Sex x Status	17.67	2	8.83	2.05	.14
<u>3-Way Interactions</u>					
Grade x Sex x Status	9.37	2	4.68	1.09	.34

Study Three: Negotiating
Playground Games

Kathryn M. Borman and
David E. Barrett
University of Cincinnati

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INTRODUCTION:

The sheer amount of time children invest in keeping company with their friends is emblematic of the central importance of children's friendships in middle childhood and pre-adolescence. More than half their free time is spent in the company of peers to the exclusion of parents, other kin or other adults (Fine, 1980; Lever, 1978). Through a wide range of both work and play activities, children in groups pursue events likely to have the following consequences: (1) socialization into adult work and social roles, (2) reinforcement of evolving notions about sexuality and sexual behavior, and (3) provision of "adult-like" avenues for channeling aggression, in the case of boys, and nurturance, in the case of girls (Fine, 1980; Savin-Williams, 1980). The major purpose of Study Three is to define the particular ways children's informal interactions in groups are important in children's negotiations of playground games in school settings.

Interaction in the course of organizing and playing games has special importance in connection with anticipatory socialization into work and social roles, the first outcome mentioned above. Children gain at least an elementary mastery of abstract conceptions such as power, roles and strategies through participation in games. As Vygotsky (1978) has argued, play at games leads development because of the necessity in games for children inevitably to recognize the "implicit rules governing the activities they have reproduced in their games" (1978:129). Mental processes based upon both concrete operational and formal operational thought in Piaget's terms or upon "higher mental functions" in Vygotsky's parlance are grounded upon social, historical and cultural foundations. Since higher mental operations are "socially formed and culturally transmitted," it follows that "if one changes the tools of thinking available to a child, his mind will have a radically different structure" (1978:126). Vygotsky's emphasis upon the significance of the material milieu in the development of abstract thinking is extremely important for a cross-cultural examination of children's games where cross-cultural contexts not only include different societies but also different distinct groups with their unique configurations of cultural "tools" within a given society, for example, groups exclusively composed of either boys or girls.

Recent research conducted in a variety of informal settings combined with careful reviews of cross-cultural studies examining peer interactions among 9-12 years old show that notions and behaviors relating to work and leisure are refined within the informal peer group. For example, Gary Alan Fine (1980) observed that American middle and working class pre-adolescent boys assume the personae of major league baseball players in little league competition and practice with as much intensity as tribal youth take on the duties of their elders in mock hunting expeditions. In contrast, young adolescent German girls at 14 are observed by peers, parents and teachers to shun "energetic" play groups in order to spend leisure time in interaction with a single close friend (Weise, 1976).

The Separate Worlds of Preadolescent Male and Female Peer Groups:

Several themes about the structure and content of leisure time emerge from a wide range of cross-cultural studies of informal preadolescent groups. The set of generalizations most frequently occurring in the literature centers upon the differences between preadolescent male and female groups (Hollingshead, 1949; Zachry, 1940; Douvan and Adelson, 1966; Maccoby and Jacklin, 1975). Girls' activities are less rambunctious and physically demanding than boys' and take the form of play at games involving one-on-one competition such as tetherball or racquetball. Also, during preadolescence and early adolescence, girls are inclined to spend time with one or two others in exchanges promoting emotional and social support (Savin-Williams, 1980). Unlike girls' more intensive associations, boys' groups are likely to be extensive, to involve friends and acquaintances, and to be more pragmatically organized, i.e., structured to include enough (and often, more than enough) players for kickball games and the like. Second, girls' circles are created from more intimate contact with one or two close friends. Although not any more stable than boys' groups, they are characterized by a "more close knit, intimate grouping" likely to provide a nurturant, accepting climate for formulating a sense of identity, the primary developmental task of the adolescent period. Boys' groups, on the other hand, seem to be formed for other purposes, perhaps leading to the frequent observation that adolescent girls on the whole possess more social maturity and poise. Boys' interactions, particularly in games and in team sports specifically, emphasize development of skills in strategizing and in managing others, both of which are related to successful adult performance in organizational settings (Lever, 1978).

There is considerable debate over the consequences of gender-related behavioral differences as determinants of adult outcomes. Lever has emphasized the negative consequences to girls who are usually not participants in competitive games organized in teams (Lever, 1978; Borman, 1980a). Lever argues that, by virtue of their exclusion, girls are disadvantaged in gaining skills in negotiating competitive interactions, managing large numbers of co-participants, developing and articulating strategic maneuvers and formulating legalistic frameworks for understanding human encounters. All these capacities are important in defining managerial responsibilities in adult life, particularly in the world of work. Others, notably Stassen (1980), argue that such an interpretation misses the point; instead girls (and later women), have alternate "meaning-making" social cognitive processes based upon a "morality of interpersonal responsibilities" and oriented more toward preserving and fostering relationships than toward winning (Stassen, 1980:18-19). It may be, as Stassen suggests, that females simply prefer not to bargain for competitive success in the playfield, instead investing their energies in affiliative interactions characteristic of pre-adolescent girls. However, in trying to understand male/female differences, it seems unreasonable to look exclusively to a

"morality of interpersonal relationships" without also looking at the specific ways in which structures of game playing are actually negotiated by girls and boys on playgrounds. For example, do girls voluntarily exclude themselves from competitive play with or without boys, or are competitive play structures, particularly team sports, controlled by boys as their exclusive province? There is ample evidence to suggest that, at least in the preadolescent period, qualitative differences in the moral reasoning skills of boys and girls do not, in fact, differ (Borman, 1980b; Gove and Keating, 1979; Selman and Byrne, 1974). Actual negotiations for a "right to play" by girls in competitive games may, in fact, frequently occur on the playfield. Boundary maintenance of games by boys may function to exclude girls from play. Girls may, in fact, mirror a "morality of interpersonal relationships" in negotiations for entry into games and turns at play. However, it may be the case that the social milieu simply does not allow easy access and entry into competitive play especially by preadolescent girls whose developing bodies stigmatize them as womanly and "unfit" for energetic, active play in competitive games. Inquiry into naturally occurring playground events is required to cast light on these questions and concerns.

What Develops in Play and Games?

Since most studies of children's naturally occurring play have centered upon the preschool child, it is hardly surprising that most of what is known about play as a context for developing social competence in interpersonal relationships is based upon the study of children's socio-dramatic play. These studies, beginning with Piaget's early observations of nursery school-aged children, have emphasized the importance of communication in structuring play. Piaget and later Garvey and Hogan (1973) and Mueller (1972) separately concluded that preschoolers were successful in their social communications 65% of the time, uttering "egocentric," failed messages in less than one third of their observed interactions. Unlike his successors, Piaget was mainly interested in failed messages for what they revealed about gaps in children's social understanding. More current researchers have emphasized the abilities children do in fact exhibit in their play encounters.

Socio-dramatic play has been recognized for its utility in serving as a laboratory for the development of specific social competencies, strategies other than communication skills per se which, like communication skills, have adaptive value in social situations. For example, the relationships among cognitive factors, motivational factors, social development and play have been realized by Soviet educators who explicitly program play activities to include role-taking or socio-dramatic play (Bronfenbrenner and Hamilton, 1978). Rubin and Peplar (1980) have recently reviewed a series of training studies each designed to incorporate skill development into the context of socio-dramatic play. These studies reveal the importance of

socio-dramatic play in teaching (1) verbal communication skills and altruism, while at the same time lessening aggressive behavior (Smilansky, 1968), (2) promoting intellectual and role-taking skills (Saltz and Johnson, 1974; Rosen, 1974), (3) increasing perspective-taking skills (Fink, 1976) and (4) enhancing social problem-solving abilities (Spivack and Shure, 1974). However, Rubin and Peplar caution against pinning too much hope on these promising results. Because detailed observations of the interactions occurring during training were not provided by any of the researchers, it is difficult to determine whether adult instruction or socio-dramatic play itself was instrumental in promoting the observed changes.

The importance of naturalistic observations of children's play from both a theoretical (Piagetian) and an applied (social competence development) perspective centers upon the content of play itself. The debate surrounds the question of whether or not play is "merely" assimilative and hence unchallenging to the extent that children adopt and enact very familiar, even stereotypic, roles (girls are mommies; boys are daddies). In fact, Rubin and Peplar have reviewed a recent study employing observational methods (Matthews, 1977) in which the investigator noted that conflicts in play (specifically, arguments over sex-appropriate behavior in fantasy or socio-dramatic play) lead participants to question cherished beliefs and assumptions and to accommodate other perceptions of appropriate behavior.

Although socio-dramatic play requires the adoption of roles, which has implications for the development of social competencies, preschool-aged children do not always sequentially order a set of turns at play (Borman, 1980b). Moreover, in playing house, for example, children will often assign the least attractive roles (dog, cat, baby) to less popular children and orchestrate episodes of play that by no means allow for an orderly or equitable distribution of lines in the socio-dramatic script. It has been argued by Rubin and Peplar (1980) and others (including Borman and Lippincott, forthcoming, 1981) that the content of play is highly dependent upon the social cognitive capacities of the child. Although children give evidence in socio-dramatic play of social perspective taking and other skills, they are hampered (1) by a morality of constraint and (2) by an inability to keep track of their own and others' perspectives simultaneously. These two difficulties make a just distribution of roles and turns at play problematic. A morality of cooperation and the skill to simultaneously coordinate one's own and others' perspectives both develop in late middle childhood (Selman and Byrne, 1974). These appear to demand that players be adept in collaboratively orchestrating offensive and defensive moves at one and the same moment.

Garvey has been consistent in her appraisal of games as the province par excellence for social cognitive development

generally and for the rehearsal of communication skills specifically. However, her empirical consideration of game play has been limited to the analysis of socio-dramatic play and has apparently not been extended to analyses of older children's more complex play; particularly competitive play in team sports. According to Garvey (1977), two aspects of play in games are especially crucial. One is the sequence and arrangement of turns at play as well as the distribution of turns across the set of participating players. Also critical is the negotiation of distractions, disruptions or conflicts by players in the game. In socio-dramatic play, according to Mathews (1977), conflict arising over the appropriateness of sex role stereotypic behavior in enacting "performances" can disrupt play.

Borman and Lippincott (forthcoming, 1981) observed that six-year-olds playing characteristically simple competitive games with relatively few rules were plagued with the following distractions to the ongoing game: (1) outside interference from children on the playground but not involved in the game, (2) verbalization of impatience by a player in the game whether by taunt or complaint, (3) abandonment of the game by one or more of the players and (4) changing the rules or changing the game. In the latter case, debate about the rules was minimal among observed first graders. Rather, in playing the game of tag, as an example, a child might offer him/herself to "it" to be tagged, a strategy that violated the generally agreed upon principle in tag that "it" chases the rest who actively resist being tagged. Verbal discussion of rule infractions as well as remarks serving to monitor ongoing action made by players awaiting a turn also occurred in observed games. However, these events were not considered distractions to the ongoing game. Rather than serving as a disruption, commentary functioned to focus attention upon game play itself serving as game maintenance routines preserving the continuity of play.

In fact, children in the complete set of observed games (hopscotch, tag, kissers and chasers, duck, duck, goose, London Bridge, Farmer in the Dell, and follow the leader) were observed to be adept at maintaining game structures; disruptions occurred in only 18% of all observed turns at play. Moreover, children's discussions of rules expressed a concern with retaining the continuity of play as well as a tendency to interpret rules so as to both assure more equitable distribution of turns at play and access to desirable roles in play, as the Farmer, "it" and to other roles associated with relatively greater power. Borman and Lippincott concluded that not only did verbal monitoring express the players' concern for game maintenance but also that play itself in games structured around a turn-taking procedure allowed children the opportunity to "gain experience in understanding the simultaneous relationships of different roles in the same game and in formulating procedural rules which benefit all participants." However, the games and pastimes

initiated and maintained by these young children were truly uncomplex as outlined in Table 3-1. Hopscotch was the only activity in which players had to both await a turn (as opposed to being constantly active) and to assign turns according to a pattern of fixed rotation. Games most frequently observed among these children were those such as tag in which players were constantly active in pursuits having procedures governing the exchange of turns but without an equitable distribution of turns according to a turn-taking format as is inherent, for example, in a team's batting order.

Social competencies generally are required for successful play by children in socio-dramatic play and in games. Taking another's perspective and acting upon the knowledge gained by doing so is expressed in children's verbal interactions during the course of play. This is especially true in games where children frequently articulate what they understand the rules to be and debate the successful or unsuccessful enactment of those rules. Children's understanding of social conventions is transparent in their utterances. For example, children of about six, taken in by outward, physical appearances, attribute an unintentional error in hopscotch (stepping on a line) to the size of a player's foot and not to either a lack of motor skill coordination or a lapse in concentration:

Sonya: You're out. # On eighters.

(to bystander) she's out.

Angela: Uh-Uh. (no)

Sonya: (loudly while demonstrating)
You got out on eighters. Right here. You gotta
put your foot like this and it's too big. You keep
steppin' on that line.

Angela: Uh-Uh (demonstrating). I went like this (and
stepped in seveners) I picked up my marker.
(Transcript made April, 1978, Oyler School).

It is only later at eight, nine or ten that children discuss rules and the breach of rules in games in terms which reveal an understanding of (1) rules as negotiable and (2) errors as mistakes or cheating.

In a following excerpt from a transcript analyzed in the current study, two sixth grade girls (aged 12) demonstrate an active understanding of both these principles in their negotiation of Dina's turn at play in hopscotch.

Jodie: Are you out?
(No response. Dina throws her marker into
the square numbered 4 and proceeds with her turn.
Three seconds pass).

Jodie: You're out.

Dina: No.

Jodie: You stepped on the line. I saw ya.
(Dina surrenders her turn as Jodie stands up and
initiates her turn. Dina takes her place on the
blacktop seated next to three onlookers).

Dina: (To onlookers). She didn't see me the other times!
(Transcript made May, 1980, Hoop School).

The logic operating behind the rule invoked here is something like this: "Stepping on the line constitutes a violation of the rules resulting in the loss of a turn at play but only if other participants in play observed the offense and call upon the player to make accounts." Although the younger girls in the first excerpt understand that stepping on the line constitutes a rule violation, their logic for defining it as such is quite different. It rests upon defining the relationships of physical features (e.g., the player's foot is too big to avoid encountering the line). Also, young children are likely to enforce their decisions as Sonya does by enacting the violation. Concrete operational intelligence applied to an understanding of game rules appears to propel players to specify carefully (indeed concretely) the constituent physical features of a rule violation. Discussion of the rules involved in the perceived error suffices for abstract reasoners.

Research Questions:

It follows from the preceding discussion that children's negotiations of playground life are important in several respects. First, these interactions provide a context for anticipatory socialization into work and social life. Second, girls and boys are likely to initiate and sustain activity in radically different sorts of games. Last, with increasing age, both boys and girls develop increasingly sophisticated strategies for negotiating rules, roles and power in the context of games.

The following questions guide the analyses to be described in this study:

1. What patterns of player activity and patterns of turn taking characterize the games freely initiated and maintained by third and sixth grade children at the three elementary schools of interest (Covedale, Hoop and Oyler)?
2. What patterns of time spent by children in activity preceding the game, organizing the game and playing the game characterize children's negotiations of playground life? How are such patterns uniquely characteristic of the frequently observed games of boys and girls?
3. What patterns of distractions are associated with turns at play in boys' and girls' games?
4. What patterns of game maintenance strategies are associated with twins at play in boys' and girls' games?

By analyzing the set of patterns described in the questions above, a clear understanding of the structure and process of children's informal interactions in their spontaneously formed and unsupervised groups can be achieved.

METHODS AND PROCEDURES:

Sample:

The sample in this study included 13 girls and 10 boys. This group contained four third grade girls and eight sixth grade girls, four third grade boys and six sixth grade boys. Eight of these children had previously been classified as game shunners, indicating on playground logs an aversion to active participation in organized games and a preference for activities such as hanging around, observing others and so forth. Twelve children had previously been classified as experts on the basis of their reported patterns of playground game participation in a single event while four were classified as samplers whose playground logs revealed their regular involvement in more than one playground game. It had been hoped that one child of each sex in each grade from each of the three game statuses - expert, sampler, and shunner - could have been observed. However, inaccessability of certain children due to absence from school, inclement weather and other difficulties limited the sample to the number of children included here.

The Data:

The data for Study Three consist of 23 audio taped records of children's spontaneously organized playground activity. Children who served as focal players were outfitted with a small backpack containing a compact tape recorder (Sony BW-11). In addition to the taped record of each child's playground activity, an observer recorded in field notes the identities of speakers, locations of interactions and the progress in minutes and seconds of ongoing events. These taped records were gathered during a three month period in Spring, 1980 on the playgrounds of three elementary schools. These schools and their playgrounds have uniquely different characteristics as described in Study One. During this period the following distribution of games was recorded:

Distribution of Games:

<u>Game</u>	<u>Focal Player</u>	<u>School</u>
<u>Kickball</u>	1. Michelle, third grade, girl	Oyler
	2. Tom, third grade, boy	Oyler
	3. Karl, third grade, boy	Covedale
	4. John, sixth grade, boy	Covedale
	5. Mark, sixth grade, boy	Hoop
	6. Sam, sixth grade, boy	Hoop
	7. Steve, sixth grade, boy	Hoop
	8. Ed, sixth grade, boy	Hoop
<u>Hopscotch</u>	1. Gina, third grade, girl	Covedale
	2. Dina, sixth grade, girl	Hoop
	3. Cheryl, sixth grade, girl	Oyler
<u>Jump rope</u>	1. Angie, third grade, girl	Hoop
	2. Sally, sixth grade, girl	Hoop

<u>Game</u>	<u>Local Player</u>	<u>School</u>
<u>Chasers/tag</u>	1. Regina, third grade, girl 2. Mahala, sixth grade, girl	Oyler Oyler
<u>Racquetball</u>	Tammy, sixth grade, girl	Hoop
<u>Softball</u>	Coleen, sixth grade, girl	Covedale
<u>Four-Square</u>	Ronja, sixth grade, girl	Covedale
<u>Tetherball</u>	Beth, third grade, girl	Covedale

In addition, three transcripts were made for children who did not participate in any game-playing activity. A last transcript was judged unusable for these analyses.

The Analyses:

Two sets of analyses were conducted in order to answer the questions of interest. The initial analyses centered upon how children structured their activity on the playground. Here the specific focus was upon both the structure of the activity itself operationalized as the pattern of turn-taking and the allocation of players' activity during the course of the game. Player activity was dimensionalized simply as "players constantly active" and "players not constantly active." Also, the temporal nature of activity structures was determined. Specifically, the time spent preceding, negotiating and playing the game was calculated for each focal player.

The second set of analyses centered upon the process of game play itself. Here interest centered principally upon utterances children made in monitoring ongoing action in the game. We were particularly interested, on the one hand, in distractions which threatened ongoing game performances and, on the other hand, in game maintenance strategies which positively contributed to the continuity of action in the game.

Sets of distractions and maintenance strategies were not established a priori but, rather, were generated from the data through careful analyses of written transcriptions of audio taped records and field notes. The set of decision rules and categories are contained in Appendix I. Reliability for two coders (Borman and Barrett) was calculated as a percentage. An 85% agreement was achieved by the two coders for independent codings of two full transcripts. Subsequent analyses were conducted independently by the two coders who consulted on difficult cases.

RESULTS AND DISCUSSION

Results are reported for 19 children whose transcripts included records of their participation in playground games. These results are organized around analyses of game play itself and events leading directly to game play. To put it another way, there is some transcribed material not analyzed here including three transcripts in which focal "players" were not players at all. In two of these cases (a sixth grade boy and girl at Oyler), the observed children chose to hang around talking with friends for the entire recess period. In the remaining case, the third grade boy being observed (at Covedale) elected to take on the role of disruptor of others involved in a kickball game.

Portions of players' transcripts not taken up with events either leading up to game play or in game play itself were also not considered in these analyses. The fact that 83% of the children for whom transcripts were made participated in at least one game is itself an important finding. Children are more likely to play a game than not during the single period of their day in school when they have relatively free choice of behaviors.

Another important aspect of the observed games is their ubiquity. Although material conditions varied across the three playgrounds, there was a fairly equitable distribution of the most frequently occurring game, kickball, and precisely the same distribution of the next most frequently played game, hopscotch. There are, however, important points of contrast. First, at Oyler kickball is the sport of younger children while at Hoop it is played by older boys. The two recorded kickball games at the third school, Covedale, were played by a boy from each of the two grades. Second, play at games generally was simply more likely to take place at the latter two schools. In fact, hopscotch, kickball and variants of tag were the sum total of observed games at Oyler. The trend at Oyler was for older children to be involved in games in an offhand way if at all. Thus, a third point of contrast is inherent in the developmental profiles of the three schools with younger children at Oyler more likely than older children at the same school to be involved in games. The reverse is true for the other schools, although sixth grade girls at Hoop with the exception of three or four athletic and charismatic "stars" were desultory in their pursuit of game play, often flirting, practicing cheers or hanging around with same-sex peers. This pattern of behavior was in strong contrast to that of their male counterparts which was characterized by deep and persistent commitment to play in games.

It should be kept in mind that children in this study constituted a representative group of randomly selected subjects from each of three playground statuses (expert, sampler, shunner). On days their audio taped transcripts were gathered, no experimenter manipulated their behavior. Rather, observers remained mute and followed at a distance wherever they were led by focal players. Thus it is notable that the same games (kickball and hopscotch) consistently named in playground logs in the fall (Study One) were those most frequently observed

in the spring. These games apparently sustain their appeal at least over the period of the school year.

Eifermann (1971) argues that "steady" games, those played more or less constantly with sustained involvement, are typically games that present continuous challenge to individual players. It is certainly the case that performance in kickball can be improved by individual practice. Hopscotch in Eifermann's typology is a "recurrent" game, one that is played intermittently but that reaches great intensity during each "wave." Individual players master skills and reach a plateau in the level of their performance with peers who constitute a group of regular players. Once a level of mastery is attained by each of the regular participants, outcomes become predictable and the challenge is dissipated. Kickball play retains its challenge both because it requires a wider variety of skills to be marshalled for successful individual and team performances and also because it is played with a larger, shifting body of players, making overall proficiency in play problematic from game to game.

Developmental trends observed in the data make sense in light of a perspective drawn primarily from Piaget but also informed by Vygotsky. In this context, older children would be expected to engage in games that demand an abstract understanding of competitive game structures, strategies, rules and roles. Girls, however, are socially coerced by prevailing local and more general norms from seeking entry into predominantly "male" games such as kickball. In Vygotsky's terms, the "tools of the culture" may be provided for those girls who with some social risk seek to use them but they may be experienced by girls in different ways than by boys whose engagement in play is considered normative. As a consequence, girls may well adapt to the same milieus in different ways than boys. Indeed, in addition to motor skill proficiency girls who were observed in play in male dominated games of kickball and racquetball gave evidence of what can only be termed charismatic, assertive and comic skills, abilities which tended not to surface in female-dominated games and activities.

Her charismatic qualities assured Tammy, a sixth grade girl at Hoop, accordance of special privileges in racquetball play by her male classmate who had taken on the task of self-appointed referee of the ongoing game. Tammy who ranked high in popularity among her classmates was also a skillful game player, frequently beating boys in racquetball play. Her playground logs indicated a distinct preference for racquetball play; 12 of 14 logs made reference to the game.

The following transcription of the initial 10 seconds of play in her turn illustrates the supportive role played by the "referee" Martin.

(Tammy walked onto the court to face her male opponent):

Martin: Come on, Tammy.

Tammy: (pointing) I get that side.

Martin: Show ((him your stuff)). (pause),
Come on, Tammy, show 'im who's boss.

(3 seconds pass)

(Tammy and her partner commence play. Tammy
hits the ball out of bounds).

Bystander: Boo!

(3 seconds pass)

Martin: Come on, Tammy. You can do it.

(Transcript made May, 1980, Hoop School).

Tammy receives four encouraging utterances from the "referee" Martin in less than 10 seconds at the outset of her turn. Two sets of players had faced each other during the time Tammy stood in line awaiting a turn. During the six minute period Tammy spent in line, Martin was recorded making only one supportive utterance ("What a shot, Brian."). As "referee" he made at least 12 pronouncements such as "Oh. That's out," and "You took Kevin's serve that functioned as officiating comments. It seems clear that a skillful female player is accorded special encouragement and perhaps even more. The following is from the observer's field notes: "It is quite clear that Tammy has the leading edge in this game. Martin consistently winks at her mistakes and at her opponent's good moves."

Participation by girls in kickball was never observed at Covedale but was a frequent occurrence on the other two playgrounds. However, in a field of 35 players at these schools, typically only two or three girls were present. Usually they held membership on the same team and appeared to position themselves in close proximity as if to lend each other support.

In a transcript made at Hoop (see Appendix II), two girls at play in the recorded game of kickball were observed to utilize especially vivid assertive, even aggressive approaches to play in the game. Alesia was a particularly large and well-developed black sixth grader who widely reported her participation outside school in karate lessons. In fact, as Steve approached the playfield at the outset of recess period, Alesia accosts him, leaping on his back and riding him for a few seconds. Someone yells "kick her in the face" Alesia retorts "I know you love him, but God..." (There is talk about being gay recorded later in this game). Alesia later participates in assaulting a marauder who attempts to take the ball being used in play and freely engages in active support and playful banter with her colleagues. And, this game, as most kickball games at Hoop, was racially mixed.

Alesia: (shouting) Two out and I'm up!

Mike: (commenting on a play) He's safe!
(6 seconds)

Alesia: (into tape recorder) (laughs)

Unknown boy: Yeah, blackface!

Alesia: I'm only wonderful. I didn't say ((how far)).

Mike: (initiating a conversation with Steve.) Certain people hafta have the ball.

Steve: Well, you shoudn'ta ran.

Mark: Let's go, Alesia.
(encouraging her as she takes her turn)

Mike: (as Alesia begins to run to first) Go getcher big fat butt... Ohh! Run!
(3 seconds pass as Alesia holds up on first).

Alesia could "dish it out" as well as take it. In regulating the movement of a teammate she bellows: "Larry, get outta there, you little bum!" At a later point in the transcript she is recorded saying "you fat little (()))." In response to the obliterated and no doubt abusive taunt loudly and from the field come the shouted letters "D-A-R-N." In field notes Alesia and a white male teammate are described as doubling up with laughter and as together in a duo initiating a round of punning with the outfielder.

Not all girls were accorded the same privileged status in the game as Alesia. A less accomplished female player, coming up for her turn to kick in the same game was greeted with: "You oughtn'ta throw so hard, it's only a girl-- Your girlfriend!" Apparently, in order to be engaged as a respected teammate, as Alesia is, girls had to be perceived as equally and perhaps as more skilled than male team members and not as girlfriends.

The appropriate use of humor to negotiate relationships in the game can be observed in Alesia's ready willingness to pun. Another girl in the same game used humor to defuse a potentially volatile situation arising over a close call. As an argument broke out, a member of the offense, the tallest boy in the sixth grade at the school, came out from behind the plate. As he approached the infield, the female fielder initiated the following conversation:

girl: You wanna fight about it?

Scott: Yeah

girl: Go join the Army!

Table 3-1

Games of First-Graders Classified by
Their Turn-Taking Procedures

	Games with assured turns in a fixed rotation	Games without fixed rotations but with procedures governing exchange of turns	Games with neither rotations nor exchange procedures	Games without turns
Players not constantly active	Hopscotch (N = 1)	Kissers & chasers; duck, duck, goose (N = 3)	(N = 0)	(N = 0)
All players constantly active	(N = 0)	farmer in the dell (N = 1)	follow the leader; London Bridge (N = 2)	running races (N = 1)

Since Scott utters no recorded response and game play is soon underway, the statement appears to effectively disarm at least this male player.

Girls who play boys' games maintain what appears from their interaction in play to be a clear idea of their "right to play." Girls do not haltingly enter the game or hesitantly negotiate a turn. Although girls may actively bargain for a favored position in the kicking order, this sort of exchange is prevalent for both sexes. The transcript recorded for a third grade girl, Michelle, at Oyler displays the ease of entry and bargaining for a turn that characterize these negotiations:

Michelle: (while walking towards the diamond): Hey, ((Curtis)).
(2 seconds)

Michelle: # Can I play? (2 seconds) Can I play?

Curtis: O.K., you're after us. # She (()) him.

Michelle: (to a player): Be after you...
(later in the same transcript).

Michelle: I'm after you.

Richard: You're after me!

Unknown boy: After me

Richard: Otherwise I kick ya off the team.

Michelle: Uh.

Unknown boy: I'm after him then.

Michelle: Well, I'm after you.

Michelle maintains her right to play and continues to bid for a favored position in the face of threats of expulsion from the team (apparently not, however, directed at her).

An interpretation of the data just reported should be placed in perspective. As a general rule, girls avoided participation in male-dominated games. This was especially clear at Covedale school where no girls were present in any recorded games of kickball. It should be recalled from Study One that Covedale compared to Hoop, the other school with a substantial black minority, had far more racially segregated games as evident in playground log data. As an example, disproportionate numbers of black girls at Covedale reported tetherball as a modal game. Although, kickball was to some extent racially integrated at this school, it was exclusively male. Even when girls were admitted to play at Oyler and Hoop, only a small minority participated, and these were merely tolerated, it appeared, because of their consummate athletic skill and personal characteristics, notably some combination of charismatic, assertive and comic gifts. Thus, girls who play boys'

games are likely to attend school undivided by racial cleavage and perhaps relatively undivided by social differences as well.

As a socially homogeneous setting Oyler school was not faced with the same issues as the other schools. Within the Urban Appalachian culture, girls and women appear to be the cultural standard bearers who negotiate social exchanges for their families through church and community participation. This accords women an important status in families where economic and social privileges may evolve from women's interactions with the majority culture. Michelle's participation in kickball reflected perhaps the most equalitarian system of role relationships observed in any similar transcript featuring a girl participating in male-dominated game play. Direct comparisons between Michelle's game and the games in which either Tammy or Alesia were recorded at Hoop are extremely difficult because of the age differences. It may be that older girls received both more flattering attention (as in Tammy's case) and at least equally and perhaps more disparaging attention (as in Alesia's case) because girls qua girls are more salient to preadolescent boys. It may be that a player is a player so far as a third grader is concerned and that player sex has little particular importance in a male-dominated game at a younger age. However, this may not uniformly be the case across all mixed-sex games. In games with relatively equal numbers of male and female participants such as chasers, girls as a group were chased by groups of boys and vice versa.

Several conclusions follow: (1) girls are unlikely as a general rule to participate in male-dominated games, (2) girls who do participate have unusual and highly attractive (to male game organizers) combinations of athletic skill and personal attributes, notably charisma, assertive and comic abilities, and (3) preadolescent girls as opposed to younger girls at age nine are likely to experience power, rules and roles in male-dominated games in different ways than their male colleagues in the same games.

Analysis One: Patterns of Turn-Taking and Player Activity in Games:

Results of the initial analysis of all observed games undertaken by the 19 focal players are reported in Table 3-2. Here turn-taking characteristics and player activity are dimensionalized in a five x two table comprising four categories of observed turn-taking procedures, a no game category and two categories of player activity, "players not constantly active" versus "players constantly active." Clearly, the largest number of observed games (N=17) fell into the top left cell. Altogether, seven different games were sorted into this cell, each distinguished by two features: (1) assured turns for all players in a fixed pattern of rotation and (2) the consequent demand that players remain inactive (usually while awaiting a turn) for some period of time in the game. Of the seven games, the most frequently occurring was kickball (N=8), followed in frequency of occurrence by hopscotch

(N=3) and jumprope (N=2). One case each of racquetball, softball, four-square and tetherball was also observed.

Only one observed instance of two other games (chasers and tag) was recorded. Both chasers and tag demand that players remain inactive for a portion of the game and both have procedures governing an exchange of turns; however, these procedures do not include provisions for a fixed rotation of turns assuring each player a turn as "it" (in tag) or as the chaser (in chasers).

The remaining activity, stunts, is more play-like than game-like: stunts, as performed by the observed sixth grade girl and her three same sex friends at Hoop constituted a set of leaps, jumps and other moves associated with cheerleading. In fact, these acrobatics were accompanied by the repeated chant "We're the Class of '86!"

These data include all the transcribed playground activities observed for both grade levels at the three schools in the spring of 1980. They suggest that by grade three, children have made a shift to involvement in games relatively more complex than those of younger children (Table 3-1) but relatively similar in complexity to those of older children in grade six. Looking at these data as in Table 3-3 in a larger perspective using playground log modal activity data and applying Lever's more sophisticated notions of complexity (see Study One), what seems most important is that with increased age comes increased participation in a wider variety of games of high complexity. It may be that an important shift in game playing skills, interests and so forth is accomplished by grade three and that these skills refine and elaborate themselves in a wider variety of games by age 12. Certainly this conclusion is suggested by the trend in the data reported in Table 3-3.

Analysis Two: Patterns of Time Preceding, Organizing and Playing Kickball and Hopscotch Games:

Results of the second analysis of observed games are reported in Tables 3-4 and 3-5 and in Figure 3-1. These results, with a single exception, are for all kickball games in which boys were focal players and for all hopscotch games in which girls were focal players. These two sets of games were selected for analysis because of their greater frequency of occurrence in comparison with other observed games. The single exception in kickball was the transcript recorded for Michelle, the only female focal player who pursued the game.

On data for kickball players, a repeated measures analysis for the three different time periods yielded a statistically significant main effect for time and a significant two-way interaction for time x players as reported in Table 3-4. Children at Oyler took less time to negotiate play in kickball than children at either Covedale or Hoop while children at Covedale were generally less quick to enter either negotiations or game play. Children at Hoop spent less time finding a game and more time both negotiating

and playing kickball than their counterparts at the two other schools. The general trend at all three schools was for kickball players to spend more time in the game itself than in activity preceding or organizing the game.

For hopscotch play, as reported in Table 3-5, a repeated measures analysis similar to the analysis reported for kickball in Table 3-4 yielded no significant main effects or two-way interaction for time x players. Figure 3-1 clarifies the two sets of findings for kickball and hopscotch just reported. The marked contrast is in time spent in game play itself. Kickball players spend four times the amount of time involved in their play than hopscotch players, all of them girls. Moreover, organizing play and negotiating rules, positions and so forth is also a lengthier process in kickball game preliminaries. Kickball players take ten times as long as girls in hopscotch to sort through these matters.

Piaget sniffed at girls' games and turned his attention to boys' games of marbles (1965). It was Piaget's observation that girls' games, and specifically hopscotch, present little challenge because of their relatively low complexity. The data reported here suggest that over time and distance hopscotch has retained its characteristic simplicity relative to boys' games, kickball, specifically, in this case. Since two players are the usual number in hopscotch, there is really very little to organize in the game except to establish the order of turn-taking. Kickball with its typically large number of players possessing varying levels of skill and ability requires a much lengthier process to set things in order.

Boys' negotiations reflect a profound interest in power relationships and the establishment in the social order of the game of a relatively equal balance of power based upon athletic ability. Entry into the game is predicated upon the capacity to perform. As he approaches Kerry a sixth grade boy at Hoop who is choosing team members, a boy asks, "can I play?" the response is "can you run?" Later a boy urges "Get Emerson! Get Emerson! He can kick far." When an "unfair" distribution of skill is perceived by a player, and particularly when the balance of power favors the opposition, the player is likely to threaten to quit, as did Eddie, a focal player at Hoop.

As the game is about to begin, the division of roles is negotiated: Unknown boy: "Curt, play third. Mark, you got first? I got short stop." The lengthiest negotiations centered upon the kicking order. Moreover, an order established at the outset of the game would likely be revamped later by players jostling each other in line:

(): I'm after Kerry.

Mike: Ah, I'm after (()).

Unknown boy: You're third and he's fourth.

Unknown boy: Mike... then Mike 'n' then me.

Unknown boy: No. You're after Mike, 'n' Stacy's
after Deacon, 'n'....

(transcript made at Hoop, April, 1980).

Even though roles and power relationships are explicitly discussed in the manner illustrated above, rules are only obliquely stated and generally with reference to a specific player action. For example, a member of the defense warns a runner: "No leadin' off at all. Not a inch! Not even a centimeter!" During pre-game negotiations children typically did not either review among themselves an established code of rules or argue about playing according to one or another set. Instead, once player roles had been established, game play was initiated without mention of rules governing play. Rules may have been consensually established by kickball players who were seasoned veterans in the game by spring. Rules become problematic and are discussed only when they are in the process or show the promise of being broken. Game players are ultimate pragmatists.

Analysis Three: Distractions Associated with Turns at Play in
Boys' versus Girls' Games:

The numbers of children at play during recess made it difficult in all games to avoid the tug of distractions and disruptions to ongoing play. However, some games were more vulnerable to these problems than others both because of their physical location on the perimeter of the playground and because, especially with older girls, play was an easy target for flirtatious boys. Games of jumprope and hopscotch, with small numbers of players are an easy mark for playground marauders.

Results for the analysis of interest here are reported in Table 3-6. Distractions/disruptions took the form of (1) outside interference by the entry of new players negotiating a slot in the turn-taking order of an ongoing game, (2) complaints, taunts, disruptive protests and the like by players in the game, (3) changing the rules, negotiating a fundamental shift in game playing strategies and so forth by players in the game, and (4) abandoning the game. Abandonment of an ongoing game constituted the most dramatic and obvious form of disturbance. Cessation of play for some period of time followed in the case of each recorded distraction (n=110) enumerated in Table 3-6.

Results of the chi-square analysis performed with these data indicate significant differences between boys and girls in the type of distraction associated with a turn at play. Specifically, girls are far more likely to experience outside interference than boys. In fact, outsiders interrupted play in girls' games almost four times more often than boys' games. Although abandoning the game occurred with relative infrequency across all games, girls were more likely than boys to leave a game. Outside interference frequently was closely linked to abandonment of the game. In four of the seven cases in which girls left games of jumprope, hopscotch or tag, outside interference preceded abandonment of play in the game in question. The link between a disruption and leaving the game

was especially clear in the case of Gina, a third grade girl at Covedale, recorded on tape and with accompanying field notes playing hopscotch!

(Gina is out. Lisa begins her turn)

Boy: (in background, shouting)
HEY, HEY, HEY, HEY"

(Lisa throws her marker and hops. As she takes her turn, some boys run across the hopscotch area).

Boy: (in background) That was my ball! That was my ball!

Gina: (()).

Girl: Can I play?
(It is not known whether this was asked of Gina or Lisa).

(()): (())

(()): (())

Lisa: What did you call me?

Boy: (in background) Get it! Get it!

Unknown boy or girl: (())

Gina: How (()) did you take?
(mumbled conversation between Gina and Lisa as game continues. Sound of markers being thrown can be heard).

Gina: You're out. You forgot to pick up your marker.

Lisa: (())

Gina: (())

(Gina takes a second turn. Some boys interfere in the 8, 9, 10 - numbered area of the hopscotch form. Gina and Lisa leave the hopscotch area and walk toward the tetherball area).
(Transcript made at Covedale School, April, 1980).

In the short space of less than two minutes these players have been plagued by three incidents of outside interference. Walking through an ongoing-game of hopscotch was frequently observed and occurs here twice. Although new players are easily absorbed into ongoing kickball games, in hopscotch where players begin the game in square one and proceed through the sequence of numbered squares as the game progresses, entry of a new player presents a real dilemma. Should play cease and begin anew in order to give all players a fair shot? Or should the new player be admitted to the game with the obvious disadvantage of having missed one or more turns at play?

A single case of abandoning the game was recoded for a male focal player, Sam, who participated in a kickball game in which play was terminated after the ball used in the game was accidentally lofted onto the school roof and became lost to the players.

Overall, distractions appear much more likely to occur in the games analyzed in this study than in the games of younger children analyzed by Borman and Lippincott (forthcoming, 1981). While only 18% of recorded turns at play in the younger children's games of hopscotch, tag, London Bridge and the like were plagued with disruptions, 73% of turns at play in the games of third and sixth grade children were associated with either a distraction or a game maintenance strategy. This finding suggests both that older children are more often engaged in verbal monitoring of their play than younger children and that recess periods are more likely than the time before school in the morning to produce circumstances, particularly overcrowding, which heighten opportunities for disruptions on the one hand and game maintenance on the other.

Analysis Four: Game Maintenance Strategies Associated with Turns at Play:

Results of the analysis of game maintenance strategies invoked in boys' and girls' games are reported in Table 3-7. Maintenance strategies took the form either of game monitoring statements or of procedural questions. In addition, maintenance strategies included actions contributing to the continuity of play. Rounding up loose equipment, the ball in racquetball, for instance, or finding a new marker to replace one lost during hopscotch play serve as examples here.

A chi-square analysis performed on game maintenance strategies associated with turns at play in boys' versus girls' games produced non-significant results. Boys and girls vary only slightly in the amount of game maintenance work they carry out in games, but both utilize fewer procedural questions than monitoring statements and still fewer trips to locate stray equipment.

The most common form of maintenance work in both boys' and girls' games centered upon the oral record of ongoing events that seemed to be eagerly maintained by bystanders and other players. In virtually all cases monitoring and procedural questions dealt with the physical activity at hand in relationship to the rules of the game. For example, in kickball, a procedural question is raised by Sam who has heard his name being called:

Sam "Sam"
 What?
 #
(()) HEY!
Sig: What? Who's pitching, me?

Mark: Yeah, you!

Later in the same game Sam asserts "I thought two fouls was one out" to which Mark replies "It is - he already hit two fouls." These exchanges promote an orderly round of play in the game by allowing a consensual determination of game playing procedures in problematic situations such as this in which the pitcher Sam was unaware that two fouls had already been made by the boy at the plate.

The most important feature of this analysis is the similarity of patterns of game maintenance strategies used by girls and boys. The stress in each case is upon utterances designed to monitor ongoing action. These statements are more likely than not to not gain a response and therefore, appear to function as utterances which the speaker uses to keep him or herself actively engaged. It is almost as though players are portraying to themselves and others their continued alert and ready condition. Since, as we have seen in earlier examples, a player typically continued a turn in hopscotch until "officially" seen by a co-participant in play, monitoring seems an important strategy to employ in order to assert one's right to a turn and to acknowledge one's opponents mistakes or attempts at cheating.

Conclusion:

Far from being merely assimilative experiences as Piaget (1965) has argued, games appear to provide what Vygotsky (1978) plainly saw as events that lead cognitive development. The most troublesome aspect of the findings reported in Study Three from the authors' perspective is that different games are generally played by boys and girls and that boys' games provide the far richer environments for learning abstract concepts of power, rules and roles. Even more disconcerting is the related finding that girls who play boys' games occupy an exceedingly awkward status while doing so.

As we have reported, boys spend more time in the process of negotiating and organizing the game. This experience provides them the opportunity to actively negotiate both roles as players and power in connection with the fair distribution of skills across two teams. Once game play has begun, boys remain engaged in play for a longer period of time and suffer fewer interruptions in their play than girls. Because their play in team games provides more complexly problematic situations, their discussions of rules during the course of the game is likely to be far richer than discussion by girls in games such as hopscotch.

Girls who play boys' games provide a very interesting group for study. Their especially pronounced charisma, assertiveness and comic flair in connection with their perceived athletic prowess assured them a place on male-dominated teams. What of

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girls who may possess athletic skill but who lack the personal qualities apparently necessary to propel them into play? These girls must either be content to watch or to organize and play typically girls' games such as hopscotch. A clear case of a girl who chose the latter alternative was Dina. Dina, a member of a softball team was outside school (see Appendix II), spent much of her recorded time during recess milling about. At one point she commented to the observer that she would prefer to play with boys but that she was not sure they wanted her. It seems clear from the experience of Tammy and especially from the events surrounding Alesia in kickball that preadolescent girls run a great social risk in attempting to play boys' games.

Stassen's (1980) argument that girls and women possess a frame of reference that inhibits their involvement in competitive activities seems to miss the point. As long as norms generated in the larger society hold in the society of children, girls who attempt to excel in male-dominated activities will either be dismissed as mere girlfriends and treated accordingly, accepted as charming, skilled and deserving special treatment and treated accordingly or perceived as unusually assertive and aggressive and treated accordingly. None of these perceptions and consequent relationships accords girls equalitarian status. In our society (including within it a society of children) there still appears a great reluctance to shake off stereotypic notions about what girls should do and how they would act when doing so.

Figure 3-1

Profile of mean number of seconds for kickball and hopscotch players' time spent preceding game, negotiating game and playing game.

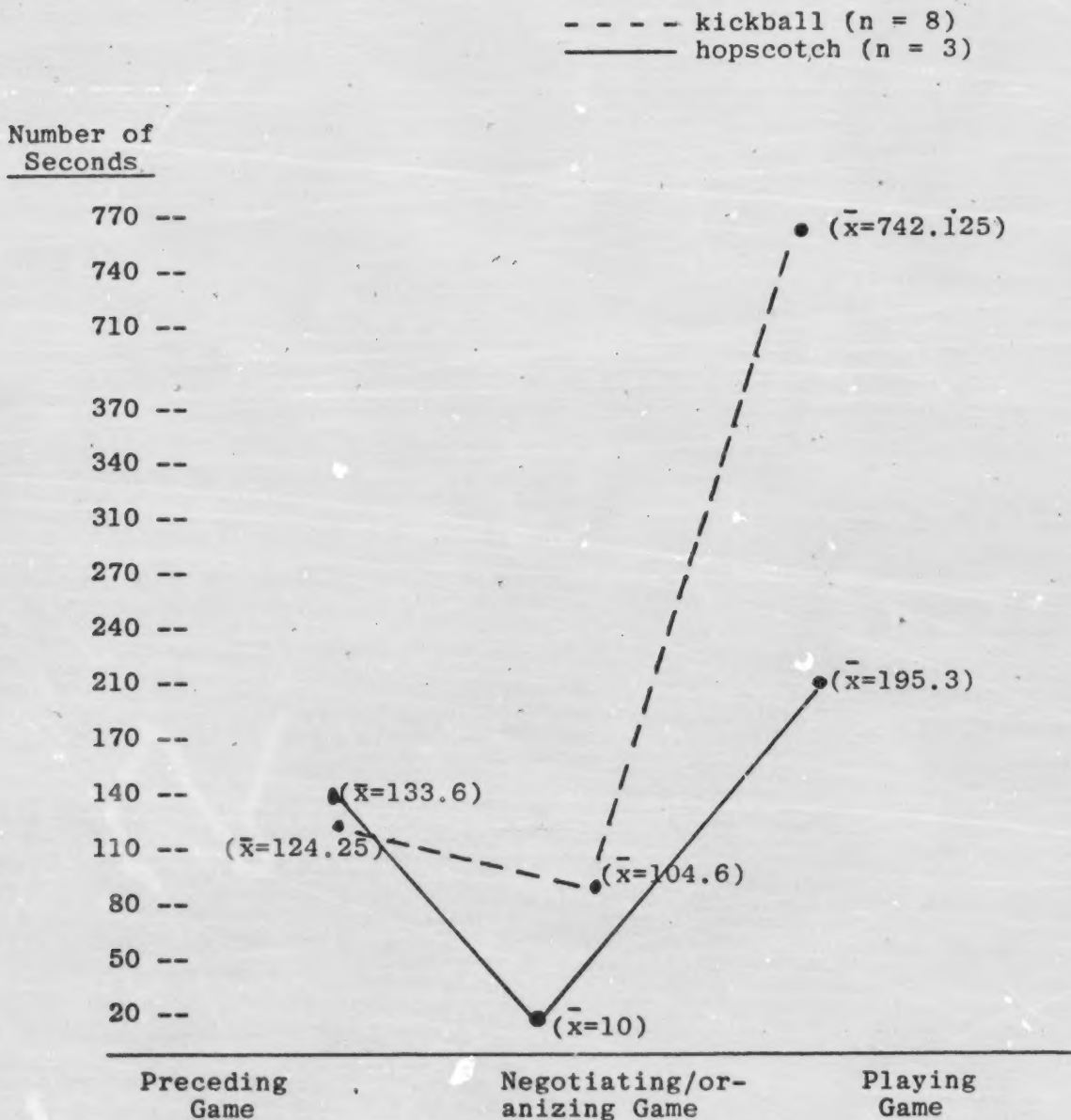


Table 3-2: Games of Third and Sixth Graders

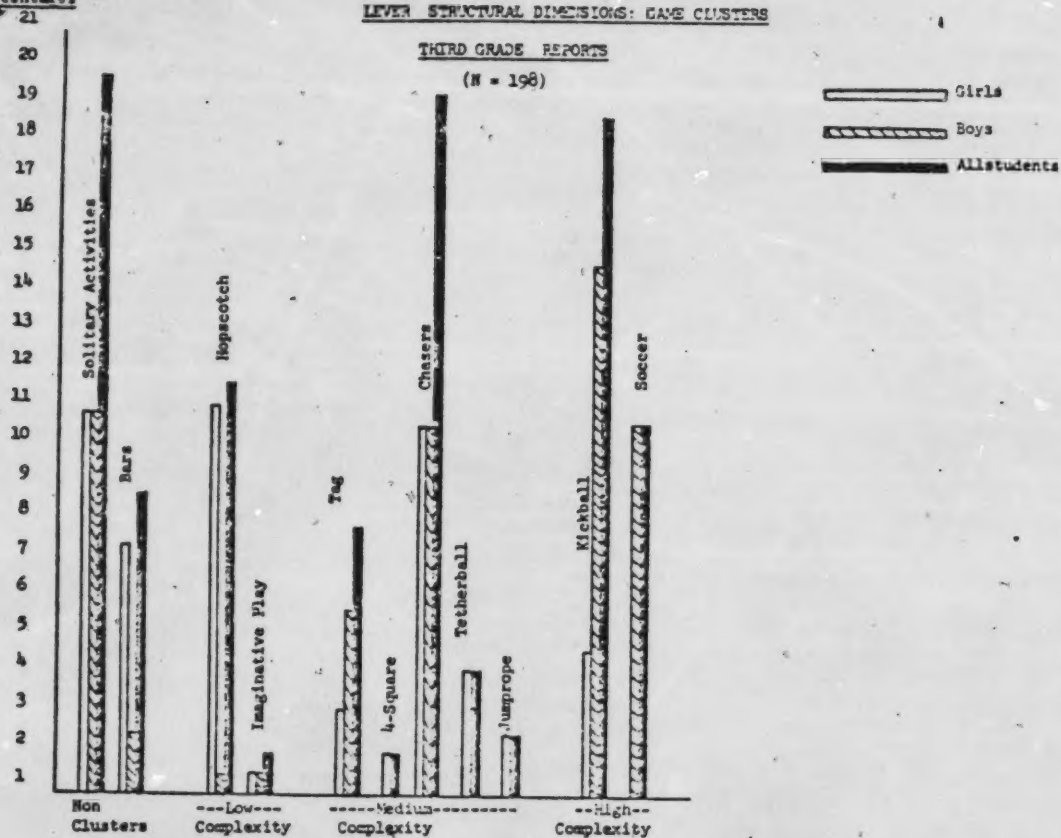
Classified by Their Turn-Taking Procedures

	Games with assured turns in fixed rotation	Games without fixed rotations, but with procedures governing exchange of turns	Games with no rotation, no turn-exchange rules	Games with no turns	No Games
Players not constantly active	Jumprope (N=2) Kickball (N=8) Hopscotch (N=3) Racquetball (N=1) Softball (N=1) 4-Square (N=1) Tetherball (N=1)	Chasers (N=1) Tag (N=1)	(N=0)	Stunts (N=1)	(N=3)
All players constantly active	(N=0)	(N=0)	(N=0)	(N=0)	(N=0)

Table 3-3

LEVER STRUCTURAL DIMENSIONS: GAME CLUSTERS

percentages



LEVER STRUCTURAL DIMENSIONS: GAME CLUSTERS

SIXTH GRADE REPORTS

(N = 206)

percentages

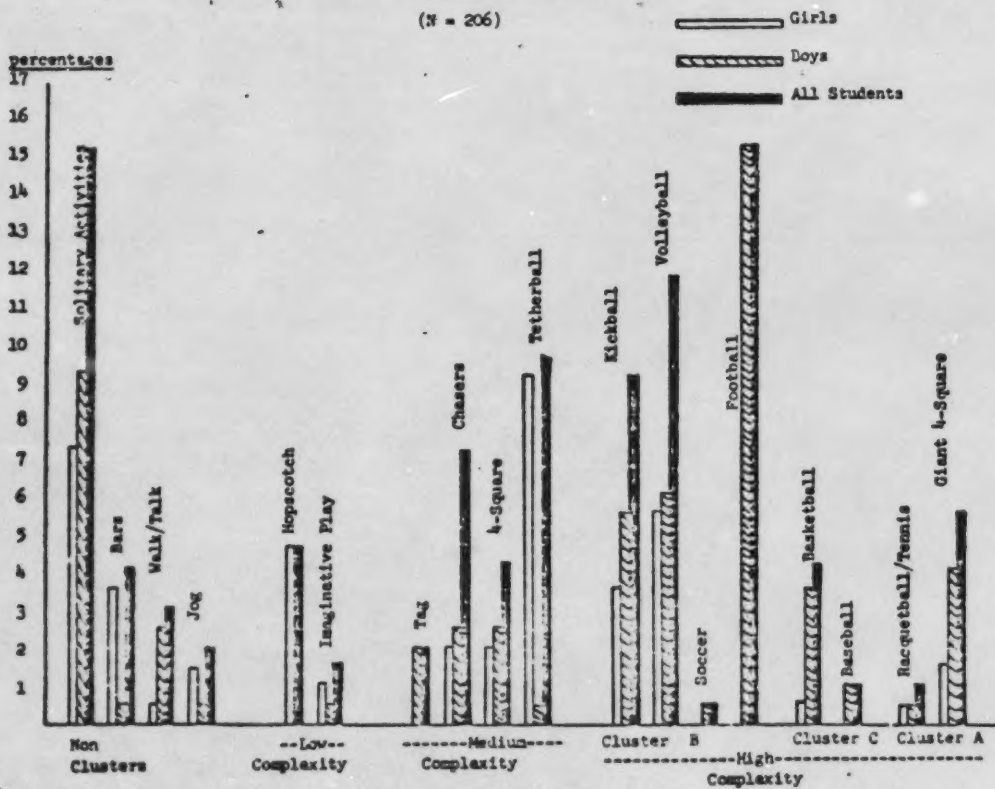


Table 3-4

Repeated Measures Analysis for Kickball Players'
Time Spent Preceding Game, Negotiating Game
and Playing Game.

<u>Source of Variation</u>	<u>SS</u>	<u>MS</u>	<u>df</u>	<u>F</u>	<u>P</u>
<u>Main Effects</u>					
Players	655991.97		7		
Time	2102829.1	1051515.6	2	13.76	<.01
<u>2-Way Interaction</u>					
Time x Players	1069488.2	76392.014	2.14	13.76	<.01

Table 3-5

Repeated Measures Analysis for Hopscotch
Players' Time Spent Preceding Game,
Negotiating Game and Playing Game

<u>Source of Variation</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
<u>Main Effects</u>				
Players	13662.82			
Time	53280.223	26640.112	2	4.778 n.s.
<u>2-Way Interaction</u>				
Time x Players	22301.777	5575.44	2.4	4.778 n.s.

Table 3-6
Distractions Associated with Turns at Play
in Boys' versus Girls' Games

<u>Type of Distraction</u>	Boys	Girls	
Outside interference	16 11.70	12 16.20	28
Complaints, taunts, etc.	8 16.72	32 23.27	60
Abandoning the game	1 3.39	7 4.65	8
Changing the rules	13	21	34
	38	72	110

$$\chi^2 = 18.93$$

$$df = 3, \text{ critical value } \chi^2 = 7.815, 11.345$$

$$p .01$$

Table 3-7

Game Maintenance, Strategies Associated
With Turns at Play in Boys' versus Girls' Games

<u>Maintenance Strategy</u>	<u>Boys</u>	<u>Girls</u>	
Game monitoring with response	54 59.70	37 51.29	111
Game monitoring without response	67 62.93	50 54.06	117
Procedural question with response	19 18.28	15 15.17	34
Procedural question without response	6 6.454	6 5.545	12
Fetch equipment, etc.	3 1.613	0 1.386	3
	149	128	277

$$\chi^2 = 4.46$$

$$df = 4, \text{ critical value } \chi^2 = 9.488, 13.277$$

$$p = \text{n.s.}$$

APPENDIX I

Determining Distractions and Game Maintenance Procedures

Distractions:

Distractions are events that challenge the continuity of the game and are responded to as such by players in the game through (a) their verbalization of an acknowledgement of the disruption by a responsive threat, taunt, etc., or (b) their physical retaliation or challenge in fighting.

Distractions constitute the initiating utterance (or action) and all responses attached to it.

Distractions are concluded either through (a) acquiescence, bargaining or (b) fighting or (c) no resolution.

Distractions in the 23 transcripts analyzed here took the following forms:

1. Interference by outsiders
 - (a) entry of new player(s) (or attempted entry)
 - (b) walking through the game by outsiders or bystanders
 - (c) teasing, hasseling or kibbitzing by outsiders, or bystanders.
 - (d) stealing game equipment
2. Verbalization of impatience, taunts, complaints, etc., by participants
3. Abandonment of the game
4. Changing the rules, changing the game, cheating, challenging rules, challenging strategies.

Game Maintenance Procedures:

Game maintenance procedures include strategies that signify active player concern with structuring the format of the game including establishing who has power, rights, etc., in the immediate context of a specific move, turn, etc. Unlike a distraction, a game maintenance maneuver is a kind of monitoring of events internal to the activity of the game itself.

Game maintenance procedures include the initiating utterance (or action) and all responses attached to it.

Game maintenance procedures may be carried off in a cursory manner without any negotiation (i.e., Play A yells "Safe" and receives no response from the other plays). There may be a give and take (i.e., Player A yells "Two outs," B responds "Three outs," C responds "Two outs").

Game maintenance procedures in the 23 transcripts analyzed here took the following forms:

1. Assertions rendered as judgments about player moves, for example, statements about a player's turn-taking status. Also comments such as "safe" or "out," negotiations about players' batting or kicking order are included here.
2. Procedural questions regarding activity in the game, for example, question regarding a decision about the kicking order in a kickball game.
3. Actions contributing to the continuity of play, for example, fetching a ball that has landed on the school roof.

Tammy Iames
Hoop School
6th Grade

Boy: (Hit the (()))¹
 Boy: (No)
 ((M)): Doesn't matter; { (()) the wall)²
 Boy: (Don't matter)²
 ((M)): (shouting) Yeah! It does!
 Tam: Can't argue with me Martin
 (4 sec)
 Ahhh, ooo
 (These utterances follow sound of ball hitting players and
 thumping the wall behind the players)
 Boy: (as a taunt): ((Cotto))
 #
 Q boy: Cotto's a ((copy cat))
 ((Cotto)): What you doin' there boy?!
 Q boy: I told you (sheepishly)
 (sound of ball hitting wall: more victims claimed)
 Tam: Gawd
 Cotto: (to Q boy): Hey, is your dad a cop? # Is that boy
 (())?
 (no response)
 (more ball-wall noises)
 Ohhh (groans)
 (()): Hey, Tammy!
 (chuckles, laughter. 6 secs)
 (kids come out of the Jr. High school bldg. for recess)
 Girl: Ohhh ((I wasn't ready)) (This re: ? Keep in mind T
 is a bystander, facing both the wall, lined with dodge
 ball players and the bldg. exit) # Ohh, big boys are
 out. (Then as a chant): Big boys out, big boys out.
 # Big boys out.
 (4 secs pass. Some muffled conversation. Then, to me,
 almost, it seems as a justification for our standing
 around)
 Tam: I'm waiting to see my cousin come out.
 (16 secs pass. Then Tam spots Dina across the playground
 yard and shouts) Hey, Dina! (We leave dodgeball game
 and go across playground)
 (12 secs pass and Tam approaches 2 girls from the other
 6th grade)
 Tam: Hey, Jenif// Jennifer!
 (3 secs) - (T is now with the girls)
 Girl: What're ya doin', Tammy?
 Jenn: That lady's watchin you, Tammy.
 Tam: ((It doesn't bother me)) #
 Jenn: (()) I don't see why she (()) (something to reveal
 that taping is part of the deal. 6 secs of over talk
 re: taping follow)
 Girl: Why do you have that tape?

Tam: To see what I do, to see...er hear everybody (('who's'))
talkin' to me.
(9 secs. Some general shouting. A Bl boy, younger, hits
Tam in rear end with a football)

Bl boy: That slip.

Tam: Yeah, tell me about it

Bl boy: Slip on there (2 secs) (chuckling) It was spozed to
slip on the ((air conditioner))

Jenn: ((He sure was weird))//

Tam: What//Come on, let's go// You ((hated)) him? (They
depart) (They walk toward basketball court)

Girl: ((20 syllables))

Tam: (shouts out name): (()) (2 secs) So what. # You
know the answers?

Girl: To the questions?

Jenn: To what questions?

((Tam)): Do I know what?

Girl: (slowly and painfully) Do you know the answers to these
questions? (no response)

(5 secs pass, girls approach bars. Dina is there, also
Kim, Bl girl)

((D)): Let me see in your (())

T: No, I (()) (8 secs)

K: I want some to (to other kids) Lena told me... (side
conversation)

(Girls are in middle of jungle gym)

((Tam)) ((to D)): Now give ((a push to me))

((D)): ((I shoulda brought my glove.)) (recall that D and Tam
have been observed to play catch during recess)

Tam: (())

(17 secs pass during which time the girls talk to 5 Bl
girls who ask about the pack and leave)

D: I can't ((do all of these things))
(in re: stunts on bars?)

(3 secs)

D: I (())((try anymore))//

T: No ((these 3 syllables,)) ((Dina))

D: (())

D & T: (laughter) (They are chasing each other around in
the middle of the jungle gym)

(6 secs)

((Screech! # Screech!))

(()): (shouting) ((Drop to the ground!))

(()): ((I need a (())))

(6 secs pass)

Tom: (singing) Welcome to the (())... # Let's sing a
song//

D: Noooooo (chuckles)

Girl: Oh my God, I (())

Tam: What?

Girl: Oh my God, ((better run)). # You're gonna sing a
song.

D: We'd better all run

(general laughter)

Girl: We'd all break our eardrums.

(shouts from playground Crack a window.

1:25

(5 secs)

(They climb down)

Girl: (approaching) Hey, (()), have you (()) yet.

Tam: No. # Do it again

(Boy demonstrates 11 secs.)

Boy: You can't do it.

(()): Yes I can

(()): Hey, help, hey, what're you doin? (10 secs of muffled conversation)

((Tam)): (asks a question)

Boy: Now this is all I've got

((Tam)): I hear ya. #

Boy: (()) ((pants)). See, I wear these everyday. (5 secs, muffled conversation)

(from field notes Tam: Is that your clothes?

Girl: Yeah

Tam: I believe it.

1 :29 D: Let's go (()) and see if there's a ball we can (())

T: I'm not going to change them all (())

D: (()) (question for clarification)

(8 secs of walking. Tam turns as she walks and says to me:)

T: There isn't anything going on today (She and D sing quietly to selves as they walk)

D: There's (())

T: Now, that's (())

D: I like (())

T: You figure I can (()) yet?

D: If someone (())

(D and T part company. Tam walks toward lunchroom door, into three sided "courtyard." A boy is wildly stomping on drinking fountain pedal: "Hey, there's no water! How did you get it to work yesterday?" This appears to me to be for nobody's particular information. 3 secs.

T approaches Sandy and Kim who are near lunchroom door)

Sand: Why do you get a backpack on your back anyway?

((Kim)): Does it belong to that lady?

(who else?)

(Two B1 boys meanwhile are having what I see as a semi-ferocious, semi-playful fight. This may cause T to split sooner then she might. One says to the other: "Next time you mess with the kid, let the kid know." T leaves, retracing steps. (12 secs pass)

Tam: What? (the girls sit by side entrance)

((Kim)): Huh?

Tam: What did you say?

Kim: I said that...a warm... Why do you always talk in the back when the tape recorder's in there?

((Tam)): We know why you talk, cuz I'm out here. (2 secs)

Kim: (())?

(3 secs)

Tam: Why are you sittin' here
 Kim: Because I((worked very hard)) and...
 Tam: (a question)
 Kim: Uhm uhm (no)
 (7 secs) (muffled conversation)
 Tam: Oh my Gawd (rises)
 Kim: What?
 (no response, Tam gets up and walks in direction of dodge ball game, pausing to observe a younger boy playing with an airplane. 36 secs pass as Tam approaches dodge ball game)
 (muffled comment. Then 3 secs later someone says "dodge ball." A boy asks Tam "What you have that thing on your back for?" No response from Tam. 22 secs. pass as she watches dodge ball game. 6 girls and 5 boys mixed by race as I recall, though I don't remember in what proportions)

1:32 Boy: (()) on it, can't run.
 Girl: Whose is it? (re: pack)
 Tam: I don't know - someone's.
 (28 secs. Tam approaches Girl)
 Tam: ((name)), do you want to play ((dodge)) ball?
 Girl: Yeah
 Tam: Come on
 Girl: Why you got that//
 (19 secs. Muffled conversation, dodge ball game sounds)
 Girl and Tam stay on edge)
 Girl: (())
 Tam: So do I. # I'm playing racquetball. (11 secs. Tam takes place in racquetball line.)
 Tam: Oh, it's ((on the line))
 ((Boy)): OK (4 secs)
 Maring (now the ump of racquetball): OUT!
 Tam: I don't like this ball
 (It is one brought from home by one of the kids in line)
 (2 secs)
 Tam: (to boy in line) Where'd you find the racquet. huh, huh, huh?
 Boy: I didn't touch 'em.
 Boy (to Tam) I don't know
 Tam: (Where didja find 'em?)
 Boy (to Tam): (I don't know) //
 Girl: (()), Tammy.
 Tam: Where'd you get 'em at?
 Goy: We went and got 'em out of the gym.
 Tam: We need to (())
 (muffled conversation among waites - 3 secs)
 Tam: Where'd you gem 'em at, really?
 Boy: // Hey, Jennifer! (())
 (8 secs)

Tam: Come on, (()), move'em.
(6 secs)

Martin: Out! He's out! (5 secs)

Boy: Is (()) still (())?

Tam: No
(5 secs)

11:34 Tam: Is the line good?

Martin: Yeah. # Except for the middle one.

Players

Boy 4	Boy 5
Boy 3	
Boy 2	
Boy 1	
Tam	

(6 secs general talking and game playing noise. Tam's main activity is observation of the game in progress.)

Boy 1: Interference! (2 secs)

Boy 4: Double interference
(3 secs)

Boy: Come on, Steve. Get it, (())
(6 secs)

Tam: Out (3 secs) Out

Chorus: Booooo
(4 secs)

Tam: Out #

Boy: Get that ball (3 secs)

Boy: Hey, (())

Boy: Out

Tam: Out # The only thing (())

Boy: Who said that?

(7 secs as new partners form)

Martin: Good

Boy (to boy in line): Is that a rubber ball? (3 secs)

Tam: Is that a rubber ball or a (())ball

Boy (with ball): Racquetball #

Boy: A racquetball?

Martin: Get in the line#

Tam: Oh shoot

Boy: What happened?

Boy: Kids are gettin better 'n last year
(4 secs)

Boy: If you won, you won, you (()) last year. (())

Tam: They're gettin' better 'n last year. # That's about all, though. (2 secs) You gettin' worse.

Boy: Huh? # No, I just haven't played that much this year. #
 I can still beat 'em though//
 Tam: I haven't played yet
 Boy: I played// I play... Ohh (games draws their attention) ...
 Out
 Boy (rushing over): ((Keep it away)) ((He couldn't keep it
 away))
 Martin: One - nothing (Brian)
 Boy: (Who are you ((did he say))
 ((Boy)): (I'm up)
 Tam: It's Brian// He's out.
 (Observ): (()) game.
 Boy: (()), you lose. That's the ((point))
 Boy: come on, Kevin, beat 'im. Brian, (keep losing it.)
 Tam: Beat the pants off him.
 Boy: Yeah, ((Black)). #
 Boy: We're gonna lose.
 Martin: You took Kevin's serve (officiating)
 Boy: Come on, Kevin. # Come on, Brian. (2 secs)
 Tam: Come on, somebody
 Q boy: Gordon, you playing next serve
 G: Yup
 Q boy: OK
 Tam: I hate these kind of balls
 Boy: I know
 (()) (not in game)): Stacy's ((())).
 Tam: (That was out)
 (2 secs)
 Martin: What a shot, Brian#
 ((Martin)): Who served it?
 (()): Me! Me!
 ((Boy)): One point

1.37 (Two new players join the line. Tammy is now 3rd.)

(()): (One - nothin') #
 Martin: One - nothin', Brian.
 Boy: (Whooop)
 Boy: (Whup, plop!) #
 Boy: (Bobbled) again
 Boy: He (bobbled again)
 (12 secs. Some muffled talk)
 Boy: Right in the kisser.
 Boy: (Yeah)
 Boy: (Yeah) Come on, Brian
 Boy: One more, Brian!
 (3 secs)
 Boy: Alright! That (touched the line)
 Boy: He (touched the line) //

Martin: Now, ((here's the)) score, OK ((it's)) two/nothing -
 Brian. (3 secs) OK, Brian. (()) #

((Tam)): ((Roll it to the (())
 (ball may or may not touch the line)

Martin: Good!

Boy: Good, ((yeah))! .
 (Sounds of clapping and comgratulating the champ.) #

Boy: Gordon's up.

Boy: (sotto voce) Oh, he'll beat 'im.
 (6 secs) (Tam pushes boy #1 forward)

Tam: Let's go! (he moves into the court) Oh, I hope (())
 wins.

Boy (goofy voice): ((()) (in the ((Gon go))!)
 (3 secs)

Boy: OK, Gordon, beat Brian easy.

Tam: Brian beat Gordon, I don't know # Gordon beat Brian. .
 (2 secs)

Boy: I'm behind (Tammy)!¹

Boy: (Tammy's gonna beat Robbie (()))¹

((Boy 4)): You serve good!
 (3 secs)

Martin: Oh. That's out.

Boy: It's in!

(()): Good!
 (A group of black kids come through court)

Boy 2: Get out! (They move through)
 (6 secs. Some conversation)

((Tam)): You're out!
 (3 secs)

Boy: Out!
 (10 secs)

Tam (to me): ((Did you listen to the tape yet?))

Obs: (()) (3 secs)

Boy: Now what's the score?

Boy: Out

Tam: (()) after?

Obs: No (()) to pick up the sound.
 (11 secs)

Boy: What's the score?

Martin: Two to one. #

Boy: Game! #

((Martin)): Come on, Tammy.

Tam: I get (that side (()))

((Martin)): Show (him your stuff)

Martin: Come on, Tammy, show 'im whose boss.
 (3 secs)

(Tammy plays, gets ball, whacks it out of court)

((Boy)): Boooo!
 (3 secs)

((Martin)): ((Come one)), Tammy. You can do it.
 (Heh, heh, heh, laughing etc) (4 secs)
 Tam: ((open up here))
 Boy: What was it?
 (3 secs)
 ((Martin)): It ((on)) the line.
 (3 secs)
 Tam: ((Jackie)) does it (()). //
 Boy: // Serve !
 (2 secs)
 Boy: It's in
 Boy: That's a score (or) What's the score?
 Boy: (((Richard's)) turn).
 Boy: (((Richard's)) serve)
 Boy 1: Gordon's not going (to ((₂)) //)²
 Tam: (((you don't know that)))
 Boy: He told us this morning
 ((Martin)): No, nuthin to nuthin
 ((Boy)): It's nuthin to nuthin
 (6 secs pass)
 Martin: One - nuthin. Good it's her serve.
 (3 secs)
 Note: It is quite clear that Tam has the leading edge
 in this game. Martin consistently winks at her mistakes
 and at her opponent's good moves.
 Tam: I'm takin' these shoes off. # Think I should?
 (5 secs)
 Martin: (()) in forty. ((Come on, Tammy))
 Tam: I wanna take these shoes off.
 (()): Why?
 (()): (4 secs)
 Martin: Robbie, you're gonna have a chance to play. (())
 before anyone else does.
 (3 secs)
 Tam: I'm ready (2 secs)
 Martin: OK, she's ready.
 (7 secs)
 ((Tam)): (asking Martin): What was that? (re: in or out)
 (3 secs)
 Boy: Move back. # Move back, Martin so I don't hit you in
 the head
 Martin: I know
 ((Tam)): Well, I'll hit you in the head (()).
 (6 secs of play)
 Tam: Bad serve anyway.
 (6 secs)
 Tam (in response to --?) No, it's two - nuthin.
 (2 secs)
 Boy: Good
 Boy: Way to go (2 secs)
 Boy: Score!

Tam: ((That time I didn't finish)) # Was that bad? #
 Tam: That was ((too fast)). #
 Boy: That's the rules. That's how they did it to me. #
 (protesting) Nah ah, that's how they did it to me
 (()): She's ((just reporting)) a bad serve because she's
 too unfair.

Tam: That's what they (()) said the rules were.

Martin: When?

(marauding group of white kids) (10 secs)

11:44 Tam: It's two - nuthin
 ((Martin)): Two to nuthin, your favor.
 (12 secs)

Martin: That's two - one

Tam: I served that. # No I didn't, two to one.
 (23 seconds, ball bounces out of court, Tammy retrieves
 it)

Tam: Two to one. #

((Boy)): I'm behind the center
 (4 secs)

Tam: Two to two.

(Cries of "Tammy", "Tammy", "Why not", "huh")
 (Tammy has lost the game and leaves, who spends the remaining
 10-15 minutes interacting with a number of other 6th
 graders - both girls and boys. She spends sometime in
 conversation with the gym teacher who tells me that Tammy
 is "aggressive", very much into sports and most likely
 views her as a "role model". She is probably right.)

Steve Stragand
Playground Tape Transcription
Hoop
Wednesday, April 30, 1980

(Wh Boy): Don't you say a word (or it might be recorded).
#

DEB: Let's see... maybe I can make this a little bit easier
on you (adjusting backpack).

4 sec

(Wh Boy): You mean you're gonna play football in that?
#

SS: No. I'm gonna play kickball.

4 sec

(Wh Boy): Yeah, I'm on your team.

3 sec

DEB: (still adjusting backpack) Sorry I'm takin so long
#

(()): You got a tape recorder on today?
#

(Bl Boy): (())

DEB: All right (you're ready to go, kid).

3 sec

SS: I'll play kickball.
#

(()): All right
#

(()): Let's play.
#

(()): Did they (()) you ((out))?
#

SS: ((No)) they never!

4 sec

(Wh Boy): ((We'll hafta murder 'em)) (regarding kickball)

8 sec as SS walks toward kickball area.

(Wh Boy): ((Hey, Chris, do you like Patty?))
#

(Wh Boy): You liar, Mike - say all you want.
#

(Bl Boy): Watchoo talkin bout, little young boy? Huh? Huh?

Huh? Huh?
#

(Wh Boy): Yeah, there it is. C'mon
10 sec as SS runs over to kickball area and Kerry Berter.

((MS)): I thought you had a parachute on
#0
Scream of laughter
#

(Bl Boy): OK, I won't say nuthin bout you n Cindy.
#

(Wh Boy): Oh, YOU N CINDY...(You n Cindy, ahh...)
#

(MS): You n Cindy...that's what Eddie (Dowers) said.
4 sec

(MS): I won't say nuthin about the three nights...
5 sec

SS: (()), Mike. You know you're just yellin cause you
wanna get on the tape recorder.
#

SS: Hey Kerry-Kerry-Kerry-Hey Kerry-Kerry-can I play?
3 sec (laughter)

(Wh Boy): Will you roll em on the ground (the kickball)?
5 sec mixed talking and yells.

(Wh Boy): Cn I play?
#

KB: Can you run?
#

(Wh Boy): Yeah I can run, but I (Wh Boy: Can I play?)
5 sec

((Wh Boy): Kerry, can I play
#

(Wh Boy): I'm on (())'s team
6 sec as SS runs over to Mark Hinkle.

SS: I'm on your guys' team.
4 sec

Mark Hinkle (to recorder): CAN YA HEAR ME IN THERE?
#

SS: Shut up, Mark, you're not sposed to be yellin in there...

//MS: Kerry, what's the teams?
5 sec

MH: C'MON, LARRY (a 4th or 5th grader)! LARRY!
5 sec as SS walks back to Home Plat.

(BOY): (()), he (()) kick the ball!
14 sec, SS still walking to the plate

(Boy): I'm after CC)))
6 sec, SS still walking

SS: Hit me Kerry
3 sec

MH: I GOT 1st PICK!
#

(Boy): Who's pickin?
#

MH: Me n - um..WHO?
#

(Boy): Me n ((Kim's)) pickin... ((?))...Hey you guys get
up there n I ((pitch)) it.
7 sec

((KB)): Hey, everybody that's playin, get in line.
4 sec

SS: What?
#

KB: Get along the wall if you're playin.
5 sec

MH: I'M PICKIN! 1st PICK! ((WHO DO)) I PICK?
20 sec jumble of voices, suddenly:

(()): Kick her (Alesia Sanders) in the face!
#

((Alesia)): I know you love him, but God...
#

((KB)): I got Steve Stragand (on my team).
4 sec

(()): Mark Hinkle
3 sec

MH: NO, DON'T PICK ME! I'LL BE (())!
#

(()): OK, that's cool
#

Scott Abernathy (to KB): MOVE, I wanna stand on that (a stump).
6 sec

MH: OK, I'LL PICK! ((Get over on the wall)) Abernathy, you
got him and ((Al)). Who else do you want?
3 sec

(Bl Boy): I wanna pick
‡

(()): (())
‡

(Wh Boy): Who's gonna pick?
‡

(Wh Boy): I will
Laughter, 8 sec jumble of voices.

(Wh Boy): Larry does.
4 sec

(Wh Boy): Ten we don't take him
‡

(Bl Boy): Hey man, you guys better get Darrin Emerson.

(Wh Boy): Emerson! Get Emerson! He can kick far.
10 sec

SA: Anybody (()), we gonna fight.
‡

(()): (()), get on that wall
‡

((SS)): (())?
‡

(()): Get on that wall ((and I'll see)). (SS, MO, MH, and
one other Wh Boy walk over to bldg with ball to throw at
each other, using brick wall as backstop.)
6 sec

((MH)): OK, I'LL BE THE DODGER!
7 sec

(Wh Boy): One more person get out.
5 sec

(Wh Boy): Don't go to me, I can't do it.
‡

(Wh Boy): (mockingly) Don't go to me, I can't do it.
‡

(Wh Boy): Don't go to me, I can't do it either.

‡
(Wh Boy): Don't go to me, I can't do it either.

‡
(Wh Boy): " " "

‡
(Girl) (distant): LARRY! I QUIT!

‡
SS: Laughs, (())
4 sec

‡
(Wh Boy): Is there a tape recorder in there?

‡
SS: Yeah

‡
(Wh Boy): ((I'm on your team)).
4 sec

(Wh Boy): Pick me - c'mon pick me! Me!
4 sec

(Wh Boy): Kerry! Kerry!

//Alesia: Thank you Berter

//Scott Ab: I done everybody like that. (5 sec jumble
Anybody wanta fight me?

‡
MH: Me! I will.
(Several others join in the fun of pretending to challenge
Scott, the biggest kid around - he chases several, all in
fun.)
7 sec

(Bl Boy) Now it's your turn.

‡
(()): Does it hurt?
10 sec jumble (they are still trying to pick sides - kids
are showing up from lunch, complicating matters.)

(Wh Boy): Oh, pick-pick-pick-pick-pick (()).
4 sec

(Wh Boy): Did you pick somebody else?

‡
((KB)): Yeah, you're on my team.

‡
(()): Hey wait, let's flip - let's flip (())!

MH: ((Bert)), I don't wanna hafta field 1st, I

‡
//(()): I do when I play shortstop, man.

‡
MH: I got 1st.

‡
((KB)): Kick in the order.
4 sec

(()): I'm second!

((MH)): I'm second kicker! ...I'm second.

(Wh Boy): I'm 1st!
30 sec rustling as SS walks around

(Wh Boy): Yahoo!
15 sec (distant argument over who got picked for what
team - Alesia wrestles with SS)

MH: HEY ALESIA, GET OFF HIM!
(10 sec

(Wh Boy): ((Curt)) play 3rd. Mark, you got 1st? I got
shortstop.

KB: HEY YOU GUYS, THIS IS IT (starting game).
8 sec

SS: Kerry, just let 'em go! (4 sec) Kerry! Kerry! (Approaches
KB) Just let em go (()).
((Just back em up)), get back!
6 sec

((MS)): I don't know. Forget about it!
11 sec

SS: Kerry c'mon (pitch the ball)! Play way back there, Mike,
cause ya ((gotta be)).
15 sec

SS: MARK...YEAH.
15 sec

((MS)): Check 2nd someone!
10 sec

((MS)): Kerry, roll it! (foul ball kicked-6sec) Strike one.
Approx 35 sec silence, (then SS runs in as teams change sides)

(()): I'm after Kerry.

((MH)): Ah, I'm after (()).

(Wh Boy): You're 3rd. and he's 4th. (I'm after Hinkle!)

(Wh Boy): Mike. N then Mike n then me (Oh good, I get my bat!)
(()).

(Wh Boy): No, you're after Mike, n (Stacy's) after (Deacon), n
(I'm not sure I can run to 1st base.)
10 sec

(Wh Goy): Shelly, are you playin (())?

(Wh Boy): She's playin so shut up
Laughter, 8 sec

(Wh Boy): Or else, Steve, kick it far so you can run (()).

(Wh Boy): (())

(Wh Boy): Kick it to my little brother, he can't (())

(()): No see right between - right between 2nd and 3rd.
(SS kicks and runs to 3rd base amidst much cheering.)
(10 sec)

(()): Hey, get somebody up there (to kick).
30 sec (incl, SS's running home and joining KB and MH on
the sidelines.)

SS: I kicked a triple. I kicked a triple, man.

MH: ((Mike)) could you see that little ((single))?

SS: Yeah that made him come in so I could kick it long.
7 sec

SS: Ah, Alesia, kick it! (She does, safely - her male team-
mates cheer).
4 sec

((KB)): Are you playin? OK ((now John, Al)) wants ya.
(two kids just showed up - someone on other team objects,
KB replies:)

((KB)): That means we're up again.

(Wh Boy): (()) you guys (()).

SS: All right c'mon Mike! Go home!

(()): Gotta go gotta go gotta go!

Scott Ab (defense): (()) at Home (kid throws ball over fence)
YOU FOOL!
8 sec

(Wh Boy): HEY, THAT GUY'S A TATTLETALE! (()) HE TELLS MR.
((FRICK?))! YOU BETTER GET OVER HERE! (Mark H has climbed
the fence to retrieve the ball)

(()): ((That's Mr. Flag!))

Alesia S: ((So that's Mr. Flag, you better)) get out!
(MH throws ball back, climbs back over fence undetected.)

(Wh Boy): Who's up?

(Wh Boy): Is (()) up?

(Wh Boy): Are you last up now?

(Wh Boy): Yeah

(Wh Boy): All right, we (())).

//(Wh Boy): One out! //

(Wh Boy): I'm gonna kill ((it)).

(Wh Boy): I'd like to (()).

(Wh Boy): I know, we know it's (()). Run your hardest!
5 sec

(Wh Boy): Centerfield, right between Abernathy...(giving advice to kicker)

//(()): No (()). //
3 sec (ball kicked)

(()): Yeah! WHOOOOO! SAFE! HE WAS SAFE!
4 sec

(()): Yeah. One out - ((Kyle)). Cmon (())
//(()): We got ((seven)). //

(()): Gonna be seven

(()): There's only one out.
10 sec

(()): Steve is gay, Steve is gay (for the tape)
8 sec jumbled conversation.

(Wh Boy): We got Tracy (Dula, who just showed up).

(Wh boy): Yeah! C'mon in, Stacy!

(()): Cmon in Stacy!
3 sec

(Wh Boy): Pour it on, pour it on, (referring to success of team)

3 sec

Alesia: RUN KERRY! KERRY!

(Wh Boy): (())

Alesia: I thought it was an out.

((MS)): He shoulda ran.

MH (to kicker): Just make contact.

3 sec

((MS)): He shoulda ran if he got off ((2nd)).

Alesia: I got centerfield

MH: I got 1st base

(Wh Boy): I got Mike and Alesia.

MH: HEY DULA, GET BACK IN HERE! (Tracy Dula is the best athlete in the 6th grade, thus a desirable teammate.)

70 sec (SS kicks fly, caught for last out of the inning.
1st kicker for next team kicks to TD, who tires to outrun him instead of throwing to MH for the easy out)

((MS)): Tracy, why don't ya throw it?

8 sec

(()): MARK, THROW IT!

4 sec

((MW)): HE'S OUT! HE'S OUT! YAAAAY....

(()): (()) (Objecting to out call)

((MW)): HE'S OUT!

(()): ((No he's not.))

((MW)): HE'S...OUT!

4 sec

(Scott Abernathy runs out to argue)

(Wh Girl): You wanna fight about it?

Scott: Yeah

(Wh Girl): Co join the Army!

Scott: He's safe!

30 sec

SS: Kerry, pitch it right! (KB has been pitching too fast)
5 sec

SS: ((No)) leadin' off (ro runner - SS is on defense) at all.
Not a inch! Not even a centimeter!
90 sec jumble as SS runs and several kids argue over
whether someone was safe or not.

(Wh Boy): 2 OUT!

Alesia: 2 OUT!
45 sec distant yelling and screaming (as SS stands alone,
silent, playing 3rd base).

(Many Voices): SAFE! HE'S SAFE!
3 sec

((SS)): HEY TOM! HEY TOM! TOM, WHAT'S WITH YOUR GIRLFRIEND?

(Wh Boy): STEVE! (())?

SS: What?

MH: GET IN YOUR POSITIONS! (())'s gonna kick it.

(Wh Boy): Hey man, I don't wanna play.

MH: Well then you better get back.
20 sec

(()): (())

(Wh Boy): I didn't.

(Wh Boy): I did, I (()).
5 sec

(Wh Boy): Man, I thought it was goin deep. (the ball)
4 sec

(Wh Boy): What did you get, a ((high fly pop))?
4 sec

((MS)): So, he's gotta get in (TD has to kick sometime).

Alesia: Well that'll break order, then!

(Wh Boy): Na-uh-uh, I'm last.
60 sec jumbled, dis-ant conversations.

Alesia: D-A-R-N, DARN (laughs).

15 sec

(()): Robbie Burns is cussin right into it. (the recorder -
I haven't heard him)
20 sec

Alesia: (()) - laughs - All right Mike, you can do it.
#

((SS)): Real easy to third (advice on where to kick).
8 sec

(Wh Boy): ((Man, I wanta kick the ball)).
6 sec

(()): I don't think so (C"MON LARRY) in distance)
#

MH: WAY TO GO, (MIKE) SINGLETON. (he just got on base)
4 sec jumbled voices.

(Wh Girl): How else would I (())?
#

(Wh Girl): No ... in't quittin.
#

Alesia: What's (())? (in the distance)
#

(Wh Girl): What, from the ((fray (can't be)))?
#

(Wh Girl): No. (MH: Aaah! SECOND BASE, HEY!)
I'm thinkin about (()).
#

(Wh Girl): You ((want))it?
7 sec screaming on the kickball field. Girls' conversation
disappears as quickly as it showed up.

Alesia: 2 OUTS AND I'M UP!
#

MH: WE'S SAFE!
6 sec jumble

Alesia (for tape): YOU GOT A M! She laughs
#

(Boy): YEAH, BLACKFACE! (for tape)
#

Alesia: I'm only wonderful, I didn't say ((how far)).
(MH: ((Certain people hafta have the ball)))
#

SS: Well you shouldn'ta ran.
#

(MS): Let's go, Lisa (Alesia - her turn to kick - she does)
#

MH: ((GO GETCHER BIG BAT/BUTT!))...Oow! RUN!
3 sec screaming

(Wh Boy): Oh, wait - I'm up.
#

(Wh Boy): I'm up.

(SS): Well make an out, so I (()).
(((Wh Boy): Who-who's after you?)
7 sec

MH (ball kicked): YEAH!

(Girl): Oh, no.

(()): C'mon, Stacy (Tracy).

(()): C'mon, Tracy.

(Wh Boy): We need the bases loaded
(((MS): Real easy to 1st.)
(SS: Kick it to the pitcher and run)
14 sec

(Wh Boy): I knew that was over again, I//

MH: // YOU OUGHTNTA THROW SO HARD, IT'S ONLY A GIRL (kicking),
your girlfriend.

(Wh Boy): ((I'll tellya when we get up,)). (Inning over -
teams change sides)

(()) (distant): TRACY! TRACY!
10 sec

SS: He's ((gonna))get that ball.

(Wh Boy): Here ya go.
40 sec jumble (as SS runs on 2-3 fielding plays)

SS: Get two - Tracy, you cover (2nd base).
4 sec

(()): Where's that Abernathy punk?
18 sec

SS: TRACY!
22 sec distant yelling.

Alesia: LARRY, GET OUTTA THERE, YOU LITTLE BUM.

(()): (()) trying to (()) kick.
5 sec

MH: ((Screaming at the batter)).
5 sec (SS running after ball)

(()): ((Foul)), Alesia's on 3rd!
#

MH: GIVE IT HERE!

Alesia: FOUL!

(()): Foul ball.

((B1)): YOU OUT, ((TOM)).

(())) : FOUL BALL!

(()): Foul ball@
13 sec of SS running

((MS)): ((What about that fight, ?))

(()): (())'s on 1st.

5 sec

((to SS)): Why dontcha get on 3rd? I'm gonna throw it to ya.

((SS)): Where is 3rd?

(()): Where's 3rd? Jeess!

SS: MARK, HOME! (SS runs to cover home).
8 sec

SS: HOME!

4 sec

SS: GET BACK! GET BACK!

5 sec running

SS: THIRD!

15 sec running and mixed screams

KB: ((IF YA CAN'T PLAY))

35 sec mixed running and distant screams

(()): Get outta the way.

12 sec mixed screams

SS: That's great, man (his team back up to kick)

8 sec

((KB)): HEY! IF YOU KICK YOU...

SS (to TD): Man, we're killin em! I had a...it dropped in the
hole. I got both of mine (homers) real easy.

3 sec

SS: Ya see that little kid?

8 sec

(Bl Boy): Ain't got ((no harm from)) nobody, don't worry
(distant)
6 sec

Alesia: He ain't even out, don't worry about it, he ain't even out.

((SS)): Get off my back!

(Wh Boy): Really.

(Bl Boy): ((Yeah, go)) - go, Mike.

((SS)): Oh, I'm after Mike, ain't I?

MH: GO!

((SS)): Scuse me.
12 sec distant screams as defense chases ball.

Alesia: You fat little (()).
(distant: D-A-R-N)

Alesia and Boy: Darn (both laugh)
10 sec mixed laughter and attempts to outpun each other
on "darn"

(Boy): G) (ahead and kick)

(Bl Boy): (defender, distant) C'MON BWOY!

(Boy): I am ready!
4 sec

(Boy): ((I gotta go old))man...
6 sec

(Boy): PLAY BALL, C'MON!

(Wh Boy): OK! HEY, ((MON))!

(Bl Boy): ((KICK EM IN))!

(Wh Boy): HURRY UP!
5 sec - ball kicked
MH: YEAH! YEAH!

Focal Child: Michelle Kincer
Grade: Third
School: Oyler
Date: April 14, 1980

Time

11:55 (I meet MK on playground. Thirty seconds after getting the backpack, she walks towards diamond)
MK: (while walking) Hey, ((Curtis)) (2 sec)
((Curtis)) # Can I play? (2 sec) Can I play?
((Curtis)) OK, you're after us (falling intonation) She (()) him.
MK: Be after you. (in order to kick ball)
(2 sec. Richard kicks and is out)
Fielder: Two outs!
Fielder 2: Two outs!
Fielder 3: Two outs!
Fielder 4: Three!
(()): (Three!)
(()): (Two!)
(()): (Two!)
(from next to MK): Two!
Fielder: Three outs
(next kicker up. 6 sec. Backpack talk, brief)
Rich: When ((I up))?
((MK)): You're after me. (2 sec)
Rich: Oh, Gawd, you're gonna laff when you see this kick.
(4 sec)
(general shouting: Yeah - a good kick)
(()) Go! Go! Go!
(Applause greets the runner)
Rich: Homerun! Homerun! We got six!
(()): Yeah!!
MK: I'm after you
((Rich)): You're after me!
(()): After me!
((Rich)): Otherwise I kick ya off the team.
MK: (uh)
((S)): I'm after him then.
MK: Well, I'm after you
(general overtalk and whooping)
(()): He's kickin' all right (6 sec)
MK: It's my ball (as she holds it) 5 sec)
((S)): ((Grab yer butt))
MK: ((I got ahold of the ball))
JM: Hey, wait a minute, Michelle (# times)
(she kicks it anyway, but waits, momentarily)
(()): Run!
(she does, winds up on 1st - 8 sec)
MK: (chuckles to self) (to the kicker at the plate)
READY THOMAS? (shouting)
(12 sec pass while MK waits on 1st. There is talk back at homeplate but none of it picked up on by MK who is well out of earshot. MK takes off on Thomas' good kick, pauses 2 seconds at second base, runs home and is welcomed 8 sec)
N: ((Kid's name)) # Eight points - We got ((back)) up now. (4 sec of muffled talk)
((MK)): Tom! # Tom! ((Anybody kicks?)) (2 sec)
((Tom)): ((Yeah)) (Like they won//Like (they won)

Time

11:55 (P and O approach Tom, an older boy)
 P: Can me and (()) play?
 ((Tom)): Let's see how many they got? (scanning field)
 One has to go on the other side (in response, I think, to unrecorded bid by 2 kids to join the game)
 ((Q)): FAIR (comment about kick) (2 sec)
 ((O)) ((Heidi)), you have to go on the other side.
 ((H)): ((Seen)) us playin'
 (3 sec of muffled talk)
 ((Tom)): Donny Couch is out
 (4 sec)
 (Shouts)
 ((M)): Don't touch it! Don't touch it!
 ((N)): (He's out!)
 ((O)): (Safe!) #
 ((P)): That's not even that fair
 ((Q)): ((Tony Last name)) gets out!//
 ((MK)): No, (())
 (Much discussion here)
 ((Q)): (()) got ((that many points))
 (counting in the background - tallying up runs?)
 ((Q)): (to MK?) I (()) ((do)) nuthin. # You're gonna play
 ((MK)): (I know it)
 ((L)): (Shouting) (I'm after Eugene (()))
 (()): I..I know
 (()): I'm after him
 (()): (It's supposed to be my turn)²
 (4 sec)
 (some talke re: kicks of others)
 (()): Stop!
 ((Q)): I get to go after (())
 MK: Uh uh (no) I'm after him
 ((Q)): You're after me.

 MK: (())
 ((Q)): Uh uh. But I'm after Tom and you're after me (4 sec)
 (25 sec between turns)
 ((MK)) (shouting a warning): You (()) when I (()), kick it ((far))
 (Meanwhile another kicker has taken a turn)
 (10 sec) (SAFE)! (SAFE)! (YOU'RE OUT)!

 (Another turn taken. This is the 3rd out. Much shouting MK and her team takes the field as strolls out to kick-ball area. MK, feeling of pack worries that the batteries have fallen out of the tape recorder - actually, there are spares in the pack and this is what she feels. After talking to me briefly, she takes a position in the infield) (22 sec)
 (Excited cries as first kicker - T. Perkins comes up to plate)
 ((Q)): (()) gonna kill 'em.
 MK: We're gonna kill em, whoooo! (2 sec)

Time

12:00 ((Q)): You can (())
 (4 sec)
 (()): ((GET EM OUT!)) (as T. P. kicks)
 (5 sec of running)
 MK (on the move with ball to tag TP) MOVE! (5 sec)
 ((MK)): ((Oh, you're out)) (2 sec)
 (()): ((TOM)) ((C'MON)) (3 sec)
 (()): ((He's up this one))
 (MK takes up position in infield covering 2nd base -
 there is some conversation among her teammates in the
 field - 4 sec)
 MK: (a sort of shout of encouragement/advice) ((Hole on//
 Hold on, (2 syllable word))).
 (()): I have a Frito (displaying bag)
 (There is a feud involving players at plate that holds up
 the game briefly here. Consultation with the "local elderly
 aunt" and the veep occurs. Next up is Kelly W. for whom
 Lisa holds the ball, place kick style.
 (()): OUT! (This said as KW
 (()): OUT! kicks it foul)
 (26 seconds. KW's kick is picked up by MK who makes the out
 by throwing it at her)
 (()): SHE'S OUT!
 (()): SHE'S OUT! These voices are
 (()): SHE ((CAME)) OUT!! at a distance
 (()): SHE'S SAFE!
 (()): UH UH! (NO) These voices are
 (()): NO WAY close at hand
 (3 sec)
 MK: That's two outs! (loud voice) (this next in a shout)
 YOU'RE OUT!
 (5 sec of running)

12:03 MK on Lisa's kick, but Lisa W makes it safely to 1st.
 ((MK)): ((Kick 'em ((in))))
 (7 sec, muffled talk. New kicker up)
 (()): KICK IT! (11 sec pass. This kicker kicks ball to
 infielder who hits the runner on the feet)
 MK: YOU'RE OUT! # (()) # THREE OUTS 9this last shouted
 as MK and others stroll in)
 ((P)): She (()) to me
 MK: ((three outs))
 ((P)): Got the whole (())
 MK: Wait!
 (Team gathers)
 VP: Hey Shorty, hey young man ((background talk))
 MK: //It's Thomas (and then its mine)

Time

12:03 ((P)): (Hey, ((person's 1st and last name)), you're out)
MK: It's Thomas', then it's mine
((Q)): (no)
((L)): (I'm after you)
(()): (((I wanna)) kick)¹
MK: It's mine then it's you #
(big bunch of overtalks all on the topic of who gets to
kick - on toto this debate takes 25 sec)
((Q))...'member it's my kick #
(())...'Yours? (5 sec)
((Sk)): MINE! MINE!
((A)): It's mine, Skip!
((Sk)): It's my ball!
((A)): It's your (()) then it's mine!
(10 sec of overtalk and continued debate)
(MK kicks and runs - 4 sec)
Fielder: Let me throw it in!
(10 sec of running as MK takes a base on another good kick)
Fielder: (as MK runs) ((She'll be safe))
Fielder: (after MK takes base) ((Tina)) throw it in!
(Tina): (a protest)
((MK)): She didn't throw it in
((Q)): Yeah, but she still ((have)) it in her hand!
((B)): I know//Yeah//But she's only ((get it)). They got//
they got out. We called that at the beginning of the game
when you wasn't here.
((Otherfielder - girl)): So, you're out
((MK)): No.. (you got to make one more) (But she eventually
goes back to 1st)
(7 sec) (I believe another kicker goes, but MK stays)
(Fielder): It's my own base (to MK) When I ((when they get

(3 sec) OK!
(())
(27 sec pass)
((Fielder)): ((Her)) out? (re: MK)
((Fielder)): (Shouting) SPREAD OUT! (as kicker comes up)
(12 sec)
Fielder: (relatively quiet) Get ready, team
(8 sec)
Fielder: OUT field! (4 sec, MK, runs, comes back.)
(25 sec)
(A fight erupts in the center of the field. I don't know
how it started. The Aunt intervenes and one boy leaves.
Two balls roll into the field from elsewhere on the play-
ground. They are rolled out by game players.
MK: Come on, John
(()): One out!
MK: Two! Two!
(()): One out! (3 sec)
MK:

Time

12:03 (()): (())
(()): Three outs! #
MK: You're out, John (3 sec) (I believe MK comes home, scoring run. What follows is behind the plate talk.

(()): Okay, okay
(()): It's my...
(()): You're on...
(()): Why did you do it?
(lots of overtalk)
Tom....Tom....
(()): It's my pitch
(MK): They tagged base...
(()): (in reply) (()) You got to catch them with ball.
(()): You're out?
(()): One out?
(()): You gotta tag 'em with the ball
(6 sec of overtalk)
(()): Sam's after me
(2 sec of overtalk)
Sam: I can't come ((up right now))
MK: I'm after him
(()): No uh
(overtalk 6 sec)
((Tom)) (interrupting the great debate over who goes next):
It's Kelly's kick...Kelly's kick...
(fight continues. MK leaves - 60 minutes - bell rings after about a minute but until that time MK joins jump rope line. She is 8th in a line of 10. Two mothers are turning the rope.
Conversation following:
K.B.: Michelle, tell me about that game.
MK: What game?
KB: Baseball game you were playing...(kickball)
MK: (OH)
KB: Yeah//what//whatever//what is that game called?
MK: Football
KB: Football? # What...was the score when you left?
MK: We had fourteen. They had 12
KB: Oh # How long had you been playing?
MK: Huh?
KB: How many innings? # Do you know? #
MK: 5
KB: 5 innings? # Who was on your team?
MK: Uhm.. # Richard, Sam. # Uh, Richard, Sam and some other ones...
MK: I don't know...Paul. And Richard and...Couch wasn't on it (lots of talking)

Time

KB: What was the final score?

Boy: Ten to three//

MK Uh uh. We had 14

Boy: Don't you wish... (loud squabbling 4 sec)

Teacher: Watch your mouth

MK: She (())//

Teacher: Watch your mouth.

(teacher leaves)

KB (to boy): What game were you playing

Boy: Kickball. We won 11 to 3

KB See you later, Michelle; bye...

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